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News Letter

OIL TECHNOLOGISTS' ASSOCIATION OF INDIA
WESTERN ZONE

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The Goa Glamour

The RSDC Conference at Goa, in October 2008 is on full steam. Already in top-gear, the event will get into a glamourous track very soon. Start Packing your bags.

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

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OIL TECHNOLOGISTS' ASSOCIATION OF INDIA WESTERN ZONE

From the Editors's Desk

The RSDC bash at Goa

Did you see the brochure on the RSDC Event at Goa, Oct. 12th to 15th 2008, Then, you don't know what you are missing. For one thing, it is so colorful and distinguished that you can't easily put it down. If it propels you to action you many glitter like Gold - no, no - Platinum - and Diamonds on your lapels. It is just not a routine , run- of the - mill event. No, not on your life, Take a look at the distinguished speakers. A well-scripted package by them to bring in the latest on the subjects. To Listen to them may electrify your thoughts, You are invited to participate in the glitter & gewgaw.

The GOLD MINE

OVERVIEW OF CASTOR INDUSTRY

By
Shvetal Vakil, *Chairman*
SEA Castor Seed & Oil Promotion Council, Mumbai.

Good Morning Ladies & Gentlemen,

Respected Mr. Dilipbhai Sanghani, Hon'ble Minister for Agriculture, Government of Gujarat, Mr. Pranav Adani, Mr. Pravinbhai Thakkar,Mr. Ashok Sethia, President SEA, respected guests on the dais, fellow delegates, members of media and my friends from Castor fraternity. It is once again my proud privilege to welcome this large gathering to this historic city of Ahmedabad in vibrant Gujarat.

The farmers of Gujarat have invariably stood up to the clarion call from trade and industry and responded with bounty of crop in hour of need and the trade and industry here has occupied the position of pre-eminence for years This unique combination of entrepreneurial farm community and trade not only has placed Gujarat in leadership position globally but has the undisputed credit of retaining this unique position for over a decade and half. I salute these enterprising Gujaratis for bringing glory to the nation. while making this statement, it would be unfair not to mention the unstinted support and cooperation extended by the Government, both at the Center as well as at State level.

Castor has been my passion and it has always been my vision to place India in a position of prominence globally. I have always been at disposal of trade and industry to make the ream come true. In order for us to attain this position, it was important to bring all stake holders under a single forum and bring in fore front issues being faced by them. I must acknowledge and place on record immense contributions of SEA in providing this platform to bring us all together and fighting our cause at all levels, be it at state level in Gandhinagar or at the center in Delhi. We are not only privileged to have the presence of SEA President Mr. Sethia at this gathering but also some of the Past Presidents such as Mr. Govindbhai Patel, Mr. Bipinbhai Patel, amongst others and not to miss out Mr. B.V.Mehta, Executive Director, SEA whose contributions have been unparallel.

It is one thing for India to become Global No. 1 and Gujarat to occupy no.1 position within India but it is quite different sustaining the position in times to come. For India to retain the position it is important to have

- Dissemination and access to information
- Efficient market with transparency in price discovery
- Access to technology for value addition
- Domestic consumption base

Let me touch up on each of the above and evaluate where we stand today in each of these areas.

Dissemination and Access of Information. Castor is a commodity for all practical purpose and price volatility is fundamental to any commodity. However, in Castor, price volatility was far in excess. Castor is like any other oilseed but it is still different. One cannot compare Castor to oilseeds such as Soybean or Rapeseed which is cultivated and harvested in millions of tons. Castor is cultivated in comparatively smaller volumes and does not justify the extent of volatility as it displays year on year. I would call Castor more as a “Technical Commodity” internationally say in line with smaller oilseeds such as Linseed and does not warrant the extent of price volatility present in Castor is actually detrimental to it. Look at the scenario globally, 3 major producing countries, India, China and Brazil. Both China and Brazil are barely self sufficient hence world has to depend upon just one country i.e. India. A country which had a reputation of unstable trade policies in the past, limited transparency and a high level of price volatility.

Castor is a commodity with versatile applications but requires a fair amount of R&D with a lead time

significantly high. No industry or a company with the right frame of mind would invest in R&D in Castor as by the time some result are visible it is a few years down the line and with uncertainty commercial viability is suspect. Internationally it is advisable in fact to alternatively look for a raw material which is not so sensitive.

One key factor responsible for this price volatility was lack of availability and access to a reliable data on crop size, Supply, Demand etc. used by traders and farmers alike for taking trading decisions. Thanks to the initiatives of SEA, this is no longer an issue. Appreciating this to be a critical need, SEA ventured into conducting Crop Survey to assess crop size, harvest period, price band and farmer's intention to sell etc. a critical information used and manipulated by speculators and traders to their own advantage, invariably led to speculation. Now with assignment to AC Neilson, a world reputed market research agency that has a track record spanning over 4 decades in India in this specific area, this is no longer an issue. Relevant information is made available and shared which is more authentic has brought about some sanity in price movement. There is a reliable data which is publicly shared. This has brought in confidence in minds of not only traders in India but players world over. AC Neilson Crop Survey has become synonymous with SEA's International Seminar and people wait for a dependable price dissemination based on the findings of their survey which get published at this Seminar which has actually become a “Calendar Event”.

This is evident from the presence of increasing number of international delegates in these Seminars year on year. This is further reinforced by the fact that the International Castor Oil Association (ICOA), the global body for Castor has lent its support to this and has come to India for their General Body Meeting to coincide with our International Seminar. Thank you Very Much ICOA for your valuable support.

Efficient Market With Transparency in Price Discovery. The dawn of nineties saw a sea change in economic policies pursued by the Government. The growing fiscal deficits and balance of payments crisis brought to the fore weaknesses of the policies followed till then. In 1991 the government embarked upon economic liberalization program, with stress on market orientation and globalization, to improve economic efficiency in all segments. The reform of market was necessary to render it free, fair, and transparent and fully informed so that prices formed in it are close to the equilibrium levels as determined by the true factors effecting supply and demand. Futures markets reforms would be complete without a well-regulated and efficient futures market. Emergence of National level Multi Commodities Exchanges is the result of these well-conceived policies. Today, these National Exchange offer an opportunity to hedgers and market makers to operate without fear of manipulation as these Exchanges provide “Performance Guarantee” through carefully structured byelaws and stringent norms of membership. Now with efficiently managed Futures Markets coupled with a huge-spot market, one can't expect a better ground for efficient price discovery process.

Access to Technology is critical to profitable and sustained growth of Indian Castor Industry. I have in the past talked about Indian mindset of commodity orientation and short term approach. This made India remain at commodity end to be satisfied with wafer thin margins as margins derived from value addition were taken away by international players who had access to technology. Key to success for Indian Castor Industry is investment in R&D and value addition. Albeit at a slow pace,I am pleased that some of the enterprising players in India have invested in technology development and started manufacturing value added castor derivatives with advanced technology. I wish them a great success and urge others to start taking similar initiatives for a long term sustainable and profitable growth and bring India on the global technology map. Here, let me take the liberty to urge Government to lend support to the industry and encourage investments behind technology development. This is critical as without Government support, industry will find it difficult to attain any significant level of success.

Domestic Consumption Base has been a serious cause of concern for Indian Castor Industry. Despite India being the largest producer of Castor Seeds, we have amongst the lowest consumption base. We barely consume just about 20% of our total production. Net result is we are forced to unload our produce in international markets at un-remunerative prices for lack of alternative. Thus whether there is a bumper crop or a small crop, prices are driven by international players. Hence in order to ensure farmers realize fair prices for their produce, it is important to increase domestic consumption to

increase, it is critical that there is investment behind technology and both go hand in hand. When I say technology in this context I not only mean technology for development of Castor Derivatives, but also developing technology for consuming these derivatives. Considering Castor being versatile, with wide and varied applications, a greater focus is required in wider areas across to increase consumption base and not just limiting to primary level usage in traditional applications such as Paints and Surface Coating, Lubricants etc. Government and Industry partnership is imperative to make this a success.

I urge, Government of Gujarat particularly to come out with a white paper in consultation with industry and duly supported by Government of India and formulate policy guidelines which will encourage investment behind technology development. Going by the past track record, I am confident industry can expect a whole hearted support in this regard.

"Self Reliance" is a key word for success for Castor trade and industry going forward. Evolving a plan encompassing all stake holders, right from farmers to traders to industry and exporters working together under the overall guidance of Government will certainly take India through this critical path of success. I am confident our sentiments would reach right quarters within Government and SEA will play a nodal role in bringing all together to build a winning team to take us to our ultimate destination.

I am happy with the overwhelming presence of a large number here, particularly our guests from overseas and members of ICOA. We have an action packed agenda for the day to deliberate and I am confident there would be all round participation which would be enriching.

Let's join hands and march towards a brighter castor business for tomorrow.

Thank you.

[Source: SEA NEWS CIRCULAR, Vol.:X, ISSUE:11, FEB.2008]

Some of the sponsors of 1st ASDC

6th INTERNATIONAL SEMINAR ON CASTOR SEED, CASTOR OIL & ITS VALUE ADDED PRODUCTS

17TH FEBRUARY, 2008, AHMEDABAD, GUJARAT

CASTOR CROP SURVEY 2007-2008

Castor Seed Oil & Moisture Percentage

Andhra Pradesh

Castorseed Collection Place & District	Castor Seed Variety	Oil Percentage	Moisture Percentage
Nandavanam, Kurnool	Kranti	48.13	5.17
Kodumuru, Kurnool	Navbharat	48.20	5.18
Pagidala, Kurnool	Kranti	48.32	5.62
Emmigenoor, Kurnool	Kranti	48.22	5.02
Adoni, Kurnool	Navbharat	48.38	5.46
Pebbore, Mahaboob Nagar	Kranti	49.61	4.86
Wonapanthi, Mahaboobnagar	Kranti	49.49	5.41
Thimnajipeta, Mahaboobnagar	DCH-14	49.62	5.01
Godwal, Mahaboobnagar	Navbharath	48.30	5.58
Jadcheria, Mahaboobnagar	Navbharath	48.52	5.19
Kulkacharla, Ranga Reddy	Kranti	49.44	5.00
Gandeed, Ranga Reddy	Navbharath	44.53	4.89
Dhoma, Ranga Reddy	Kranti	43.83	5.31
Chandampet , Nalgonda	Kranti	45.68	5.19
Valigonds, Nalgonda	Navbharath	44.65	5.21
P.A.Polly, Nalgonda	DCH-14	48.30	4.99
Devora Kenda, Nalgonda	Kranti	45.89	5.21

Note: Samples collected during January, 2007

Gujarat

Castorseed Collection Place & District	Castor Seed Variety	Oil Percentage	Moisture Percentage
Khed Brahma, Sabarkantha	G-4	46.94	5.15
Idar, Sabarkantha	G-4	50.69	4.43
Sabarkantha, Talod		49.54	4.84
Surendra Nagar, Mali		48.56	4.37
Banaskantha, Palanpure		50.71	4.36
Banaskantha, Deesa		47.22	5.14
Gandhinagar, Kalol		51.81	4.59
Kachchh, Bhuj		48.44	4.21
Banaskantha, Bhabhar		51.34	4.53
Mehsana, Unjha		48.80	4.11
Sabarkantha, Modasa		48.19	4.64
Rapar, Bhuj		47.36	4.33
Patan, Sidhapur		48.51	4.51
Rajkot, Jetpur		48.58	3.98
Banaskantha, Dhantiwada		49.07	5.04
Bhuj, Bhuj		48.35	4.75
Surendra Nagar, Dhangadra		48.86	4.69
Sabarkantha, Himatnagar	Avani	50.00	5.33
Jamnagar, Bhanwad		48.55	5.22
Kutchchh, Mandvi		49.08	4.05
Surendra Nagar, Halavad		48.54	4.46
Rajkot, Dhoraji		48.83	4.49
Patan, Sami		48.62	5.72
Patan, Patan		49.70	4.01
Banaskantha, Palanpure	G-4	49.80	4.50
Banaskantha, Devdar		48.74	5.26
Kachchh, Anjar		46.99	4.66
Mahesana, Vijapur		50.41	4.94
Patan, Patan		49.35	4.45
Mehsana, Mehsana		48.22	4.38
Banaskantha,Deesa	G-4	47.59	4.83
Mehsana, Visnagar		47.36	4.73
Sabarkantha, Dhanera		49.64	4.68
Jamnagar, Jamjodhpure		48.46	5.63
Jamnagar, Kakwad		48.49	5.01
Banaskantha,Vav	G-4	53.05	3.11
Mehsana, Kadi		47.60	4.79
Kachchh, Bhachau		46.21	3.92
Banaskantha, Kankrej	Triveni Shiva	47.08	5.20
Kachchh, Bhuj		47.10	4.16
Banaskantha, Vadgam	G-4	49.15	5.11
Kachchh, Anjar		47.15	4.80
Patan, Chanasma		51.36	4.40
Patan, Sidhapur		48.89	5.05
Gandhinagar, Kalol		49.64	5.18
Mehsana, Tolsasi		47.89	5.07

Note: Samples collected during January, 2007

Rajasthan

Castorseed Collection Place & District	Castor Seed Variety	Oil Percentage	Moisture Percentage
Jalore, Bhinmal		47.15	4.31
Sirohi, Abu Road		48.24	4.32
Hanumangarth, Ravotsar		46.1	4.93
Jodhpur, Osiya		46.76	4.80
Hanumangarh, Mohar		47.52	5.47
Jalorem, Samerpure		48.67	4.24
Jalore, Sayala		48.38	4.43
Sirohi, Shivganj	Avani	51.00	5.67
Pali, Bali	G-4	48.54	4.08
Sirohi, Sirohi	Avani	48.28	4.47
Jalore, Raniwada		50.40	4.32
Jodhpure, Jodhpure		48.97	4.20
Hanumangarh, Mohar		47.11	5.13
Jalore, Ahor	G-4	48.74	4.49
Sirohi, Revdar		51.15	4.89
Jalore, Jalore		47.23	4.37

Note: Samples collected during January, 2007

- Samples were collected during survey from individual farms and the analysis results may not reflect the entire area.
- The analysis of samples is done Courtesy: M/s. Geo-chem :Laboratories Pvt. Ltd., Mumbai

[Source: SEA NEWS CIRCULAR, Vol.:X, ISSUE:11, FEB.2008]

EXCISE DUTY NOT APPLICABLE ON GUMS, WAXES, SPENT EARTH AND FATTY ACID FROM REFINING OF VEGETABLE OILS UNDER NOTIFICATION NO. 89/95-CE DATED 18-05-95

SUMMARY OF
COOIT'S Trade Estimate for Rabi Oilseeds Production and Availability of Vegetable Oils during 2007-08 Season

29th All India Seminar on Rabi Oilseeds held at Agra on 2nd March 2008 has arrived at the following Rabi Oilseeds Crop estimate for the year 2007-08.

1. Rabi Oilseed Area & Crop

Oilseeds	2007-08		2006-07		Percentage Change	
	Area Lakh ha	Crop Lakh T	Area Lakh Ha	Crop Lakh T	Area Lakh Ha	Crop Lakh T
Groundnut	**10.14**	**20.20**	8.96	18.50	(+)13.17	(+) 9.19
Rape/Mustard	**59.60**	**50.90**	66.07	60.20	(-) 9.79	(-)15.45
Sunflower Seed	**10.48**	**9.30**	12.04	10.60	(-) 12.96	(-)12.26
Sesame Seed	**1.35**	**2.10**	1.30	2.10	(+)3.85	No change
Safflower Seed	**3.15**	**1.70**	3.41	1.90	(-)7.62	(-)10.53
Linseed	**4.86**	**1.80**	5.18	1.90	(-)6.18	(-)5.26
Total	**89.58**	**86.00**	96.96	95.20	(-)7.61	(-)9.66

Area as per GOI data as on 22.02.2008

Oilseeds	2007-08			2006-07	% Change
	Kharif	Rabi	Total		
Groundnut	**52.70**	**20.20**	**72.90**	53.50	(+) 36.26
Soybean	**94.60**	**-**	**94.60**	79.60	(+) 18.84
Rapeseed/Toria	**2.00**	**50.90**	**52.90**	62.20	(-) 14.95
Sunflower Seed	**5.30**	**9.30**	**14.60**	16.00	(-) 8.75
Sesame Seed	**4.50**	**2.10**	**6.60**	6.10	(+) 8.20
Castor Seed	**9.10**	**-**	**9.10**	7.80	(+) 16.67
Niger Seed	**0.70**	**-**	**0.70**	0.70	No change
Safflower Seed	-	**1.70**	**1.70**	1.90	(-) 10.53
Linseed	-	**1.80**	**1.80**	1.90	(-) 5.26
Sub Total	**168.90**	**86.00**	**254.90**	**229.70**	**(+)10.97**
Cottonseed	96.10	-	**96.10**	89.90	(+) 6.90
Copra	6.5	-	**6.50**	6.20	(+) 4.84
Grand Total	**271.5**	**86.00**	**357**	**325.80**	**(+)9.73**

Salient Observations:

1. The area under Rabi Oilseeds Crop 2007-08 reduced to 89.58 lakh hectares from 96.96 lakh hectares i.e. down by 7.38 hectares.
2. The overall Rabi Oilseeds Crop 2007-08 reduced to 86.0 lakh tones from 95.2 lakh tones last year.
3. Rabi Groundnut Crop has increased from 18.5 lakh tones to 20.2 lakh tones. The overall Khartif & Rabi Groundnut crop increased to 72.9 lakh tones compared to 53.5 lakh tones last year.
4. Rape-Mustard including Toria reduced to 52.9 lakh tones compared to 62.2 lakh tones last year, mainly due to reduction in area by 9.8%, dry weather during sowing period Oct/Nov 2007 and damage due to frost in some parts of Rajasthan & North India during January, 2008.
5. The Castorseed (Kharif) crop revised to 9.1 lakh tones from 8.5 lakh tones estimated earlier at Kharif Convention.
6. The cottonseed bales estimate revised to 310 lakh bales from 300 lakh bales and therefore the availability of cottonseed increased to 96.1 lakh tones from 93.0 lakh tones estimated earlier at Kharif Convention.
7. The overall 9 oilseeds crop for the current year (2007-08) is estimated at 254.90 lakh tonnes estimated earlier at Kharif Convention.
8. The total vegetable oil availability from Kharif and Rabi Oilseed crops for the year 2007-08 (Nov- Oct) is estimated at **84.8 lakh tonnes** against **77.6 lakh tonnes** in the previous year i.e.up by 7.2 lakh tonnes.

[Source: SEA News Circular Vol. X, Issue:12, March 2008]

Ministry of Health and Family Welfare (Department of Health) New Delhi.

Notification Dated 25th February 2008

G.S.R. 106 (E) The following draft of certain rules further to amend the Prevention of Food Adulteration Rules, 1955, which the Central Government, after consultation with the Central Committee for Food Standards, proposes to make in exercise of the powers conferred by sub-section (1) of Section 23 of the Prevention of Food Adulteration Act, 1954 (37 of 1954), is hereby published, as required by the said sub-section, for the information of all persons likely to be affected thereby; and notice is hereby given that the said draft rules will be taken into consideration on or after the expiry of a period of thirty days from the date on which copies of the Gazette if India in which this notification is published, are made available to the public;

Objections or suggestion, if any, may be forwarded to the Secretary, Ministry of Health and Family Welfare, Government of India, Nirman Bhawan, New Delhi-110 011.

The objections or suggestions, which may be received from any person, with respect to the said draft rules, before the expiry of the period so specified, will be considered by the Central Government.

DRAFT RULES

1. (1) These rules may be called the **Prevention of Food Adulteration (Amendment) Rules, 2008.**
(2) They shall come into force on the date of their final publication in the Official Gazette.

2. In the Prevention of Food Adulteration Rules, 1955, in Appendix-B, in item A. 17.23 relation to Rice Bran Oil,for the words and figures “Unsaponifiable matter …. Not more than 3.5 per cent” , the following shall be substituted, namely :-

(i)	for chemically refined ..	
	Not more than	3.5 per cent
(ii)	for physically refined ..	
	Not more than	4.5 per cent
	Oryzanol content	
	Not less than	1.0 per cent

(Sd
Debasish Panda
Jt. Secy
F.No. P. 15014/28/2007-PH (Food)

AT LONG LAST !

Unsap Matter in RBO PFA Draft Rules

Ministry of Health and Family Welfare
(Department of Health)
New Delhi.
Notification Dated 25th February 2008

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Oryzanol content … Not less than 1.0	per cent."

Sd/-
(Debasish Panda)
Jt. Secy

F.No. P. 15014/28/2007-PH (Food)

FOOD, IT MUST BE

Crop diversion for bio-diesel a threat

Rapid diversion of cereals and other food items to non-food purposes, particularly for making bio-diesel, has posed a serious threat to food security worldwide.

In this situation, the greatest challenge for India, with its population of over a billion, is to raise productivity of all agricultural crops with joint efforts by the Centre and the states, said Union agriculture minister Sharad Pawar.

At the concluding session of the India International Potato Expo-2008, Mr Pawar advised state governments to seek central assistance under the Rashtriya Krishi Vikas Yojana (RKVY), which has been recently launched by the Centre with a kitty of Rs 25,000 crore to accelerate growth in the farm an allied sectors, Under the scheme, 100% central grant is available to states for taking up projects for sectoral growth, including schemes for agricultural research and education, forestry, plantation, agricultural marketing, food storage and warehousing, soil and water conservation.

“However, competitiveness of Indian horticulture products can be enhanced through various capacity building measures provided in RKVY. States are given sufficient flexibility under the scheme to make appropriate local choices for growth in agriculture and horticulture, “Mr. Pawar pointed out. He reiterated that even as wheat production is expected to touch 74.5 million tonne in 2007-08, the decision has been taken to continue wheat import in 2008 for creating a buffer stock.

Source :Indian Food Industry, Jan-Feb’08.

QUAINT, AIN’T IT?

Global food crisis:

An opportunity for Indian farmers

Globally, food prices are soaring.The Economist's commodity price index for food shows a 49% rise over the past one year. General expectations are that food prices will continue to rise. Bad news for consumers and ruling parties that is the conventional wisdom. Such conventional wisdom is bunk. This, if handled right, is a great opportunity to launch a second green revolution, feed the world and make Indian farmers rich. When farmers get rich, they will join the ranks of India's consuming classes, feeding sustained economy-wide growth.

Indians today consume a whole lot of high value foods: eggs, milk, fish, and chicken ad meat. This means diversion of food to feed the animals that yield these high value foods. Corn is the preferred feed for poultry. The common fowl has the uncommon fowl has the uncommon ability to convert the starch it eats into protein in the form of chicken. Thanks to attempts to produce large quantities of ethanol from corn, corn prices have zoomed. So coarse grains are replacing part of the corn in poultry feed. Oil seeds are in high demand not just for the food but for the fuel and also for the cake needed to feed livestock. The global shortage of wheat and rice have added to the upward pressure on food prices in general.

The European Union has reduced its subsidy on milk. Europe's export of milk has fallen. India has suddenly started to export a lot of skimmed milk powder. Milk has for agribusiness in India. Global demand creates an incentive for greater production of milk by raising milk prices for local producers.

Higher prices for food represent a huge opportunity for the farm sector. The point is to grab this opportunity, raise output and market efficiently. This is a huge challenge that cannot be left just to the forces of the market. The reality is that a host of institutional arrangements and perverse policy act as barriers to the working of market forces. The government has to, at the least. Remove these obstacles. Ideally, It should also do more, to get things going in areas where individual initiative will not suffice such as farm R&D, building large dams, unfashionable but unavoidable, and irrigation systems and drainage.

Rising food prices hurt consumers but benefit farmers. The challenge before the government is not as simple as this. In India, the farmer sells his produce for about one-third the price the consumer pays. In other words, only one-third of the rise in prices goes back to the farmer. To increase the benefit of rising food prices to the farmer and to minimize the cost to the consumer, this huge margin between farm and consumer prices must shrink.

This can be done by a number of practical steps. Abolish mandi taxes. Allow. Allow direct sourcing of farm produce by agribusinesses and organized retail obviating several rounds of transportation and loading and unloading costs, apart from intermediary margins. Organise farmers into bodies companies or cooperative capable of leveraging the opportunities afforded by the market. Encourage initiatives such as ITC's e-Choupal and DCM Shriram Consolidated's Haryali stores that offer farmers a host of inputs ranging from seed, fertilizer, tractor parts and diesel for pump sets to agronomic advice and soil testing.

Some of the method things are already underway: building rural roads, rural telecom and rural electrification. These need to be accelerated and coordinated. Farm subsidy amounts to about Rs 1 lakh core. The sector is better off if this were to be spent as investment.

[Source : Indian Food Industry, Jan-Feb-2008].

THE DANGER

Oilseed production may decline

With the oilseed sowing expected to finish soon, the edible oil industry fears that the acreage under mustard seed in the 2007-08 rabi season may be lower than the last season when a total of 72 lakh hectares were brought under the oilseed cultivation.

Sowing mustard seeds in the ongoing rabi season appears to have been jinxed by a slow start. The first round of survey by the agriculture ministry suggests sowing of oilseed has so far been complete in 57.2 lakh hectares between October 1 and December 14 as against coverage of about 64.2 lakh hectares during the same period last year.

Going with the early sowing trend, the oilseeds output in the current rabi season is also expected to fall by about one mt to 6 mt from the last year's level of 7.1 mt, according to the preliminary estimate by the Solvent Extractors' Association of India (SEA).

However, one thing is reassuring. Market is yet to take cognisance of the early prediction. Rather banking on a considerable oilseed stock from the last year's production, lying with the National agricultural co-operative marketing federation of India (Nafed) and individual stockists and farmers, traders are still waiting to take a long tern view on the oilseed price.

According to industry sources, Nafed has a mustard seed stock of 3.5 lakh tonnes, which were procured by the federation over the last three years as part of its price support operation. And, there is still a steady flow of mustard seed supply for crushers from the old stock. About 13-14 tonnes of mustard seeds still keep on arriving on a daily basis in its major mandis at Hapur, Delhi and Sirsa.

[Source :Indian Food Industry, Jan-Feb'08].

NOT SLIPPERY

EDIBLE OIL

Role in Country's Economy Vital

Oilseeds and edible oils are two of the most sensitive essential commodities. India in one of the largest producers of oilseeds in the world and this sector occupies an important position in the agricultural economy and accounting for the estimated production of 24.35 million tones of nine cultivates oilseeds during the year 2004-05. India contributes about 7-8% of the world oilseeds production. Export of oilmeals, oilseeds and minor oils has increased from 3.36 million tons in the financial year 2004-05 to 4.98 (Prov.) million tons in the financial year 2005-06. In terms of value, realization has gone up from Rs. 4613 crores to Rs. 5299 crores. India accounted for about 6.4% of world oilmeal export.

Types of Oils commonly in use in India

India is fortunate in having a wide range of oilseed crops grown in its different agro climatic zones. Groundnut, mustard/ rapeseed, sesame, safflower, linseed, nigerseed/ castor are the major traditionally cultivated oilseeds. Soyabean and sunflower have also assumed importance in recent years. Coconut is most important amongst the plantation crops. Efforts are being made to grow oil palm in Andhra Pradesh, Karnataka, Tamil Nadu in addition to Kerala and Andaman & Nicobar Islands. Among the non-conventional oils, ricebran oil and cottonseed oil are the most important. In addition, oilseeds of tree and forest origin, which grow mostly in tribal inhabited areas, are also a significant source of oils.

Consumption Pattern of Edible Oils

India is a vast country and inhabitants of several of its regions have developed specific preference for certain oils largely depending upon the oils available in the region. For example, people in the South and West prefer groundnut oil while those in the East and North use mustard/ rapeseed oil. Likewise several pockets in the South have a preference for coconut and sesame oil. Inhabitants of northern plain are basically hard fat consumers and therefore prefer Vanaspati, a term used to denote a partially hydrogenated edible oil mixture. Vanaspati has an important role in our edible oil economy. Its production is about 1.2 million tonnes annually. It has around 10% share of the edible oil market. It has the ability to absorb a heterogeneous variety of oils, which do not generally find direct marketing opportunities because of consumers' preference for traditional oils such as groundnut oil, mustard oil, sesame oil etc. for example, newer oils like soyabean, sunflower, ricebran and cottonseed and oils from oilseeds of tree and forest origin had found their way to the edible pool largely through vanaspati route. Of late, things have changed. Through technological means such as refining, bleaching and de-odouraisation, all oils have been rendered practically colourless, odourless and tasteless and, therefore, have become easily interchangeable in the kitchen. Newer oils which were not known before they have entered the kitchen, like those of cottonseed, sunflower, palm oil or its liquid fraction (palmolein), soyabean and ricebran. These tend to have a strong and distinctive taste preferred by most traditional customers. The share of raw oil, refined oil and vanaspati in the total edible oil market is estimated at 35%, 55% and 10% respectively.

Features of Edible Oil Economy

There are two major features, which have a very significantly contributed to the development of this sector. One was the setting up of the Technology Mission on Oilseeds in 1986. This gave a thrust Government's efforts for augmenting the production of oilseeds. This is evident by the very impressive increase in the production of oilseeds from about 11.3 million tonnes in 1986-87 to 24.8 million tonnes in 1998-99. There was some setback in 1999-2000 because of unseasonal rain followed by inclement weather. The production of oilseeds declined to 2.07 million tonnees in 1999-2000. However, the oilseeds production in 2005-06 is estimated to be 27.73 million tones. The other dominant feature which has had significant impact on the present status of edible oilseeds/ oil industry has been the programme of liberalization under which the Government's economic policy allows greater freedom to the open market and encourages healthy competition and self regulation rather than protection and control. Controls and regulations have been relaxed resulting in a highly competitive market dominated by both domestic and multinational players.

[Source: Business Star, Vol.:XIX, NO.4, April 2008]

KEEP AWAY IT IS FOOD FAST

Sethia, of India's SEA, Discourages Use of Edible Oils for Biodiesel

In an interview with The Financial Express in January, Ashok Sethia, President of The Solvent Extractors' Association of India (Mumbai), pointed out that India is and will continue to be a large importer of vegetable oils for at least the next 10 years because growth of domestic output is not yet keeping up with demand. Increases in gross domestic product and rising population are fueling demand for a host of food products including edible oil. Indian demand for vegetable oil is expected to rise from about 12.4 million metric tons (MMT) in 2010 to 20.8 MMT by 2015.

Consequently, Sethia called for a campaign to discourage the use of edible vegetable oils for fuels and to encourage the use of nonedible oils such as jatropha and biomass for energy requirements. Sethia argued that withdrawing 5-10% of the world's vegetable oil production for non-food use would have a serious impact on price and availability.

[Source: SEA News Circular, Vol.:X, Issue:12, March 2008]

GREAT THOUGHTS

THUS THEY THINK

No Growth Story by Left-hand

Growth story can't be written with left hand. Those who say that only a small group of people had benefited from the growth, are the worst enemies of the poor. If we continue to grow close to 9 percent G.D.P by 2020, India's per capital income will be $2,000

P. Chidambaram

Action Plant for Climate Change

The government is preparing a national action plan at the highest level to deal with the issues of climate change, including the remedial measure for mitigating the impact on food grains production. Such a plan is must to deal with a situation arising out of maize being diverted to make ethanol.

Dr. Manmohan Singh

Distortionary Message

Rs 60,000 crore loan waiver for farmers is O.K but one has to explore possible way to find out if the same benefit could not have been given in any other way. A loan waiver should not sent the message that a financial obligations like loan can be reneged, which would sent distortionay message all across.

Commodities Markets Higher than Stocks

Many people are not aware of commodities as a tradable concept, but gains can be higher than stock market, while the risk is much lower. The Commodity Market requires participation of banks, mutual funds and FIIs to attract all physical market corporate.

P H. Ravi Kumar, C.E.O, NCDEX

Half-hearted Atempts Partial Success

The government's attempts to stimulate economy in the face of coming recession are half hearted, misdirected and technically flawed. They will at best have any partial success.

Swaminathan S
Anklesaria Aiyar

Poverty-Reducing Growth Is Needed

We need to generate poverty-reducing growth in which the poor can contribute and gain. We also need a growth which reduces disparities.

Dr. C. Rangarajan, Chairman
Prime Minister's Economy Advisory Council

Rule of Law Brings Money

Economist have found that the better the rule of law, the richer the nation. Every rich country with the exception of Italy and Greece scores well and rule-of-law measures, most poor countries do not.

Prof. Dani Rodrik
Economist, Harvard University

Viability of Your Own Business

Climate change is not about making the SCR story headline. It's about making your own business viable in the long-term and for low-carbon economy.

Martin Stucntey
Global Expert on climate change

US Economy will Fail to Grow

The U.S. economy is now moving sideways. The risk of inflation accelerating is riding as the US-led slowdown spreads. But it may be premature to declare a recession.

Organisation for Economic Co-operation and Development

Intervention into Africa

To muscle into Africa, India need to think big and plan not just oil for-IT tactics but an economic intervention on the Chinese scale.

R. Parthasarthi
Economist, W.T.O., Delhi

No Life Without Loan Shark

We stay alive because local moneylender (Sahukar) gives us money. I have to deal with the loans taken by my late husband who killed himself unable to repay debt.

Jyoti Jiddewar
Peasant's widow, Vidarbha

Be Cautious with China

The Indian government should adopt an 'extremely cautious approach' before signing a free trade agreement (FTA) with China, as the resultant tariff cuts will see the Chinese goods flood Indian Markets.

ASSOCHAM

[Source: Business Star, Vol.:XIX, NO.4, April 2008]

THE DAVID SEED

Sesame Seeds
Processing methods

Sesame seeds may be the oldest condiment known to man dating back to as early as 1600 BC. The scientific name for sesame seeds is Sesamum indicum belongs to the double cotyledons Pedilaceae family. They are highly valued for their oil which is exceptionally resistant to rancidity. While sesame seeds have been grown in tropical regions throughout the world since prehistoric times, traditional myths hold that their origins go back even further. According to Assyrian legend, When the gods met to create the world, they drank wine made from sesame seeds. The seeds were said to have first originated in India and were mentioned in early Hindu legends. In these legends, tales are told in which sesame seeds represent a symbol of immortality. From India, sesame seeds were introduced throughout the Middle East, Africa and Asia. Sesame seeds were one of the first crops processed for oil as well as one of the earliest condiments. The addition of sesame seeds to baked goods can be traced back to ancient Egyptian times from an ancient tomb painting that depicts a baker adding the seeds to bread dough. Sesame seeds were brought to the United States from Africa during the late 17th century.

Sesame is produced in around 65 countries of the world. The production of sesame seeds in the world is dominated by a few countries that lie in the African and Asian continents. All the major producers of the seed produce a total of around 30 lakh tons annually. China produces the maximum out of them all sharing approximately 25% share in the total world's production. The 5 topmost producing countries contribute to around 70% of the total production level has grown steadily over the last decade and is still rising the same way.

Not only are sesame seeds a very good source of manganese and copper, but they are also a good source of calcium, magnesium, iron, phosphorous, vitamin B1, zinc and dietary fiber. In addition, important nutrients, sesame seeds contain two unique substances: sesamin and sesamolin. Both of these substances belong to a group of special beneficial fibers called lignans, and have been shown to have a cholesterol-lowering effect in humans, and to prevent high blood pressure and increase vitamin E supplies in animals. Sesamin has also been found to protect the liver from oxidative damage. The seeds come in a variety, including shades of brown, red, black, yellow, and most commonly, a pale grayish ivory. Sesame seed is processed and utilized in numerous ways. In most areas of the world, sesame is produced for its cooking oil and other direct food uses. This oil is extracted from number one quality seed. Oil for pharmaceutical uses is further refined and many cosmetics include sesame oil because of its antioxidant properties.

Some time ago, India was enjoying the topmost position in the list but china's improvement in the production and India's slow steady growth allowed china to rank first among all producers in the world. In India sesame seed provides a traditional source of oil for many communities. The country produces around 680000 metric tons of sesame seed annually and stands at the second place in terms of production. The country also ranks 1st in the context of the area covered under the cultivation of the crop. The states, Gujarat and West Bengal account for the maximum production in the country producing 2 lakh tons sesame seeds every year.

In the world market for sesame, India has a reputation of being a net exporter. The country is our of the largest exporters of sesame exporting around 5.4 lakh metric tons sesame annually. As the production in India is sufficient to satisfy the domestic consumption demand, the left over sesame i.e. around 25% of the total production is exported to various importing nations of the world. The countries that form a part of the market for Indian sesame are Germany, Turkey, Netherlands, United States of America, Greece, Hong Kong, Israel, China, United Kingdom and United Arab Emirates. In India the seeds are valued on the basis of their color. The seeds having whitish color are considered to be of good quality and having high oil content.

Harvesting of Sesame Seed: The seeds of the sesame plant have been harvested in the same manner since antiquity. Because the seed capsules of the sesame plant open when dry and allow the seed to scatter, considerable hand labor is needed during harvesting to prevent loss. After harvesting, the sesame seeds are cleaned and hulled.

Post harvest handling: There are distinct advantages to purchase the "natural" sesame seeds, those that are unhulled. The hulls act as a protective coating to prevent rancidity and keep the oil more stable. The storage sacks must be free of insects.

Losses during storage due to pests: Rats, Trogoderma granarium and Tribolium casatanium are main pests. Option in place or in combination can be used in place of Regulur pesticides use. For rats lemon verbena(Aloysia triphalla) produces lethal high blood pressure in rats. For Trogoderma granium storage below 18o C prevents development of larvae; garlic and neem can be used. For Tribolium casatanium Turmeric curcuma domestica Mint menthe spicata as powder or essential oil can be used as cure. Strong aromatic plant preparation can have an effect on taste and should therefore only be used to protect seeds.

Drying and cleaning seeds: Directly following the harvest, sesame seeds are sieved of leaves, steams and capsule residues and then dried out to moisture content of 6% as rapidly as possible which can be done on a clean, sundrenched concrete base. Where the critical 6% can not be reached only using the sun, artificial methods must be employed. High levels of humidity can cause sesame to take on moisture again and go moldy: it should therefore only be stored for a short while, or in air tight containers. The first stage of the process is cleaning. The seeds pass through an air separation stage to remove any foreign particles.

Processing of sesame seeds: Several mechanical and wet methods are used to get food-grade sesame. Field-run un-hulled seed is 70 to 95% pure. This seed is mechanically cleaned in a series of screening, de-stoning, and other processing steps to remove extraneous plant and foreign matter. The seed is cleaned further in either a washed or decortication/de-hulling wet processes. Wet process may include dehulling by steam, water, hot water and lye according to the need of production requirement. Hot lye dehulling is the fastest and most efficient method of dehulling. "Washed-natural seed" is prepared by passing seed through an agitated wash, followed by a continuous flow drier.

Sesame seed dehulling methods

Steam dehulling : In this process the sesame seeds are first steamed then followed by brushing to remove the upper coat (hull) of the seeds. This method of dehulling is not more prevalent in the industry as more than 5% seeds remain unhulled.

Water/Hot water dehulling: Now a day's this is not a popular method of dehulling among sesame seed processing industries. In this process seeds are soaked in water for a long time and then upper coat is removed by rubbing against corse surface like jute bags etc. This is not a hygienic and productive process.

Lye dehulling: In this process the lye is heated upto 90-98o C in a continous lye boiler, Kettle of the dehuller is filled with 1/4th of sesame seeds than hot lye is poured into the kettle and during this the material is agitated continuously by agitating shaft with a speed of 10-15 cycles per minute, after some time cold water is added to make the ratio 1:3 (seed:lye). The action time depends on the various factors such as concentration and temperature of lye, variety of seeds, pressure of the water and speed of the rotating shaft. The concentration of lye varies from 0.03% to 0.05%. Sesame seed are then passed through Lye acting kettle, lye washing kettle and two consequent stages of brushing with jet of water to remove hull.

Importance of dehulling: The removal of hull results in significant changes in the chemical composition of the seeds. The dehulled seeds contain significantly more fat and les crude fibre, calcium, iron. thiamin, riboflavin and slightly less phospharous than the whole seed. Oxalic acid being mostly present in the seed coat, is significantly reduced after dehulling treatment. The digestiblity of protein improves as a result of dehulling. Heat treatment during dehulling as well as subsequent processing of the flour will not lower the available lysine. Quality of oil is also not affected by lye treatment before dehulling.

Drying: Now a day, at industrial scale continuous counter current fluid bed dryers with hot air (temperature ranging from 115o -135o C) at a speed of 3-6 meter/sec are mostly used to dry the seeds.

Fine sorting and Magnetic sorting: Fine sorting is generally done to clean out sesame dust and immature seeds, to improve the quality and appearance of the dehulled seeds. Magnetic sorting is done to sort out any iron material, which may get entry during harvesting, transportation or more importantly during processing. In plant, magnetic sorters are implanted generally at the two places one at the start of cleaning and other after dehulling and before colour sorting. Metal detectors can also be installed on line along with packing machines.

Colour sorting: Different types of colour sorters are used to serve the purpose. This process improves the colour acceptability of the product.

Steam sterilization: Now a days, commercially, continuous on line steam sterilizers are used to serve the purpose. Online sterilizers are installed to kill the pathogenic microbes like Salmonella and to reduce microbial load in the finished product so that the safe quality product can be produced.

Final drying: The moisture gained during steam sterilization is further reduced by injecting sterile hot air in the product. Several methods of drying like counter current continuous fluid bed drying can be used to reduce the moisture content to acceptable limits.

Cooling: Instantaneous cooling before packing by sterile cool air improves the stability and quality of the product.

Packing: Seeds are packed in polyethylene/polypropylene bags, 3-4 ply paper bags, and paper bags with polyethylene/polypropylene liner in different size packages or as per the demand/need of the buyer.

They are transported in closed containers which are fumigated with methyl bromide or ethyle oxide according to the demand of supplier and importing country phytosanitary practices.

Sesame seed oil extraction

Sesame seeds are rich source of oil, have food as well as non food applications. The oil extraction methods from sesame seed are broadly classified into two categories, traditional as well as modern depending upon type of machinery used and percent oil extraction.

a) Traditional method
b) Modern method

Depending upon how the oil is extracted, the following distinctions are made: pressure filtration (pressing: cold and hot pressing), solvent extraction and Pelletization.

Traditional (Ghani) method: In the crushing of 10 kg of sesame seed in a ghani, about three-fourths of the material is placed in the pit and the rest is evenly laid out all around the flat rim. The animal is prodded and allowed to perambulate for a few minutes until pulverized seed is found to climb the walls of the pit. The animal is halted, and 180 ml of water is sprinkled around the chest and 120 ml poured into the pit. A further 5 minutes of pestle rotation will cause about three fourths of the seed to be pulverized, after which another 300 ml of water is poured evenly around the pithead. The material built up in the chest is raked using a crowbar, and the piece are broken up by hand and cast into the pit. After the animal has resumed movement, the rest of the seed is evenly pushed in all around. The operator now tests the solid material by balling it in his or her palm; if it crumbles too easily, more water is needed. The layer of built-up material is again broken up, and brisk ambulation is resumed. After about 45 minutes, a sudden release of frothy oil floods the surface. Another 100 ml of water is sprinkled over the oil is allowed to settle. A final quantity of about 20 ml of water is now brushed over the compacted cake surface using the edge of the palm, after which the animal makes a few more rounds. The operation is stopped, the two curved pieces are detached and the pestle is lifted out and laid aside. If the ghani has a drainpipe, it is unplugged and the oil is drawn into a vessel. Otherwise the oil released into the pit is mopped up with a piece of cloth and wrung out by hand into vessels. While the cake is still hot and before it has set really hard, it is prised out as thick slabs from the chest using a crowbar.

The phased additions of about 7.5 percent water during ghani operation have a major role. The first addition provides the pestle with a grip on the dry oilseed, and the friction produces heat. The second portion, with the heat present, cooks the ground seed. This is analogous with what happens in the stack precooker in modern screw-press operation. Protein is denatured and coagulated, and as the moisture level reaches a critical point, oil is rather suddenly displaced from the cells. The cake at this stage turns granular and cohesive, and will not reabsorb the expelled oil. After the oil has appeared, the third addition of water serves to hydrate and coagulate gums and phospholipids. This phase is analogous to modern oil degumming. The last brushing with water serves to clear surface oil on the cake and give it a sheen.

b) **Modern method**

Expeller method: Sesame contains 52 to 57% oil which is extracted by expeller method. Expellers have a rotating screw inside a horizontal cylinder that is capped at one end. The screw forces the seeds or nuts through the cylinder, gradually increasing the pressure. The oil escapes from the cylinder through small holes or slots, and the press cake emerges from the end of the cylinder, once the cap is removed. Both the pressure and temperature can be adjusted for different kinds of feedstock. Preparation of the raw material often includes removing husks or seed coats from the seeds and separating the seeds from the chaff.

Cold pressing: the starting materials for cold or expeller pre-pressing are oil seeds with a high oil content. Cold pressing (temperature of around 40o C) produces high-quality oils, but the residues left behind still have a residual oil content of 15-25%. The term expeller pre-pressing is used because the residual oil content may be removed from the expeller pulp by hydraulic pressing, hot pressing or extraction. The residues which then arise during hydraulic pressing are known as “oil cake”. Hydraulic expression produces larger pieces of oil cake than does cold pressing, the residual oil content amounting to less than 6%.

Hot pressing (expeller final pressing): the starting materials for this process are either oil seeds with a low oil content or expeller pulp produced during cold pressing of oil-rich seeds. The pulped material is heated to approx. 70o C in final screw presses, so that more cells are macerated than during cold pressing. The residues arising are known as expeller, which has a residual oil content of approx. 5 10 %.

After oil extraction, the resultant meal contains 50 to 55 % protein and is blended with other flours for food use. The flour is an emerging market with significant growth potential. The antioxidants in sesame increase the shelf-life of the products baked with sesame flour.

Solvent extraction: The starting materials for this extraction process are oil seeds with a low oil content or expeller pulp produced by previous cold or hot pressing. The oil is extracted from the rough-ground material by chemical fat solvent, such as hexane, leaving a residual oil content of only 0.5 1.5 %. The residues are then known as extraction meal. Once the fat has been extracted, the fat solvent dissolved with naphtha. The solvent is removed from solvent-damp extraction residues in a toaster (desolventizer) using steam. After cooling and drying, it is then ground into meal. During drying, overheating may occur, which turns the product brown or even black.

Oil yield: The expressed seeds of sesame generally yield 45-55 % oil which contains the glycerides of oleic (35-50%), linoleic (35-50%), palmitic (7-12%) stearic (4-6%) and myristic acids.

Advantages and disadvantages of ghani crushing method

When ghani crushing was widespread, fresh oil was in greater demand than it is today. Flavour, which was traditionally an important attribute of all oils, was best in oils produced from mild ghani crushing. Both storage quality and nutritive value were perceived as being high, although this is not borne out by modern studies. Today homemakers, especially in urban areas, demand bland and refined packaged oils.

Since vegetable oils are naturally sterile, problems of hygiene in ghani oil are unlikely. Turnover of oil in the home is so rapid, and usage of oil in India so low, that oxidative and lipolytic deterioration resulting from storage is also insignificant. Ghani cake is known to be exceptionally hard and dry and is not prone to mould infestation unless inadvertently wetted.

However, the ghani has disadvantages which are mainly economic in nature. Traditional ghanis have a maximum capacity of about 50 kg per day, and modern powered units only about twice that much. As a result, running costs are disproportionately high. If animals are used, they need to be trained, and they

Protein concentrates and isolates: Many processed products such as flakes, flours, protein concentrates and isolates can be obtained from sesame seeds. The defatted flour contains more protein than the whole sesame meal. Unlike many oilseeds, defatted flour or isolates prepared from sesame do not contain any undesirable pigments, off flavours and toxins.

Roasted sesame seeds: Sesame seeds are often roasted prior to their use in confections. Roasting reduces the moisture content, develops the pleasant flavour and makes the seed or meal more acceptable for consumption. The reduction in moisture content during roasting of sesame prevents molding and reduces staling and rancidity. Sesamol, an antioxidant was found only in roasted sesame oil, 2-furfuryl alcohol is considered as one of the most characteristic components, giving a pleasant roasted aroma to sesame seed. It is present in higher concentration in red and white sesame.

Sesame cake and meal: Sesame meal has become increasingly an human food because of the following unique properties: the presence of a high level sulphur-containg amino acids, especially methionine and cystine, lack of trypsin inhibiting factors and pleasant flavour. Sesame flour and meal have high protein content and is used to fortify foods. Its use in the diet of children suffering from kwashiorkor is also beneficial. A number of ready to use infant foods using sesame meal such as 'cholam' and 'samai porridge' have been developed in India.

There is an increasing interest in fortification of bread and cookies by replacing a portion of wheat flour with non wheat flour, especially protein concentrates, isolates and oilmeals.High protein biscuits are prepared by mixing wheat flour with roasted chickpea and roasted sesame flour to prepare the dough. In some European countries, it is also used as an ingredient in comminuted meat products. The use of sesame flour or meal in formulating high protein beverages has been reported by some other parts of the world.

Sesame Seed Paste (Tahini): The rich nutty flavor of tahini, the peanut butter of the Middle East, blends with almost any vegetable. It can be used as salad dressing when mixed with a little soy sauce and a sprinkle of water to make it thin.

Flavoring: Small amounts of sesame oil added at the end of cooking give special zest to sauces and stir-fries. Salads, too, taken on a special life with a touch of sesame oil. It's important to note, however,

Table 1: Different parameters used to check the quality of sesame seeds.

Quality Characteristics	**Minimum and Maximum Values**
Taste and Smell	Acc. To variety, fresh, not rancid, not stale
Purity	Free of foreign matter i.e.sand,stones,plant Stems insect etc.
Water content	Maximum 5-7%
FFA (Free fatty acid)	2.0% Maximum
Residues	
Pesticides	Not measurable
Heavy Metals	
Cadmium (Cd)	Max. 0.80mg/kg
Micro-organisms	
Total no. of parts	10,000/g
Yeast and fungus	Max.500/g
Enterobacteria	Max.10/g
Coliforms	Max.10/g
E.coli	Not measureable
Mycotoxins	
Aflatoxin B1	Maximum 2.0 micro gram/kg
Total aflatoxins B1,B2,Ga,G2	Maximum 2.0 micro gram/kg

that sesame oil is anything but bland. It's flavor and aroma is distinctly Asian, and anything seasoned with it will take on a hint of the Orient.

Sparkle: Sprinkle toasted or untoasted sesame seeds over vegetables, noodles, eggplant dishes, stir fries, bread doughs and cookies

before baking, and over fruit and nut confection. You can also coat confections, or bread sticks by rolling them in toasted sesame seeds before baking.

Cooking oil (Frying): Because sesame oil is expensive compared to other cooking oils, you can sauté or stir fry your vegetable dishes with a peanut or safflower oil and just add a small amount of sesame oil at the end of the cooking as a flavoring agent. When frying with sesame oil, cook foods sesame oil at the end of the cooking as a flavoring agent. When frying with sesame oil, cook foods quickly. Be cautious when cooking with the oil at high heat for prolonged periods. There is a tendency for sesame oil to release unpleasant odors.

Quality Requirements of sesame seed: The following is a list of quality characteristics with minimum and maximum values for sesame seeds that are usually required officially or by importers (Table 1). Different minimum values can be agreed between importers and exporters, providing these do not clash with official regulations.

[Source: Oils & Fats Today, Issue 7,Vol.:X, April 2008]

Highlights of ASDC -2005

FINALLY !

Govt. to aid plantation of Jatropha & Karanja

Several experts with a view to improve the efficiency and profitability of the biofuel industry, have suggested the commercial use of by-products like jatropha and karanja cakes and glycerol generated during the process of oil estraction.

To meet the needs of bio-fuel production in the country, the government has planned to facilitate the large-scale plantation of jatropha and karanja. The oil extracted from the seed of these two crops is required to undergo a costly chemical process of trans-esterification before it is ready for blending with diesel. The bio-fuel industry has demanded a series of incentives to make their project viable.

The head of the lipid science and technology division of the Hyderabad based Indian institute of chemical Technology, RBN Prasad has suggested that as the cakes of these two seeds are unpalatable and toxic, alternative applications have to be developed apart from their use as fertilizers. “These cakes contain proteins and carbohydrates as major constituents and several bioactive compounds as minor constituents. There is a lot of potential to use these cakes for production of biogas, producer gas, briquettes and several products like surfactants and lubricants,” he said.

V V Mahajani of the Mumbai-based institute of Chemical Technology, is however, of the view that the by-product glycerol can be used for production of propylene GlyGovt. to aid plantation of Jatropha & Karanja

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V V Mahajani of the Mumbai-based institute of Chemical Technology, is however, of the view that the by-product glycerol can be used for production of propylene Glycol, which can be used for making unsaturated polyster resins, poly ether polyols, functional fluids, cosmetics and toiletries flavour. Propanediol produced form glycerol has a number of applications in laminates, composites novel polysters solvents and special polymers. Liquid phase hydrogennolysis of glycerol can result in the formation of propylene glycol for manufacture of polyster fibre and synthetic cloth. He also said that Epichlorohydrin can be produced from glycerol through the solvay process and be used in production of epoxy resin. Glycerol can be dehydrated to produce acrolein and be used for the manufacture of alky! Alcohol, pyridine, bpicoline, acrylo nitrite, and acrylic acid. Glycerol carbonate has potential application as a solvent, replacing ethylene carbonate and propylene carbonate. Glycerol can produce poly glycerol esters, which can be used as lubricants and plasticisers.

[Source: Oils & Fats Today, Issue 7,Vol.:X, April 2008]

HOWZZAT ?

FOOD INFLATION OFFERS AN OPPORTUNITY

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

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

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

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

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

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

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

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

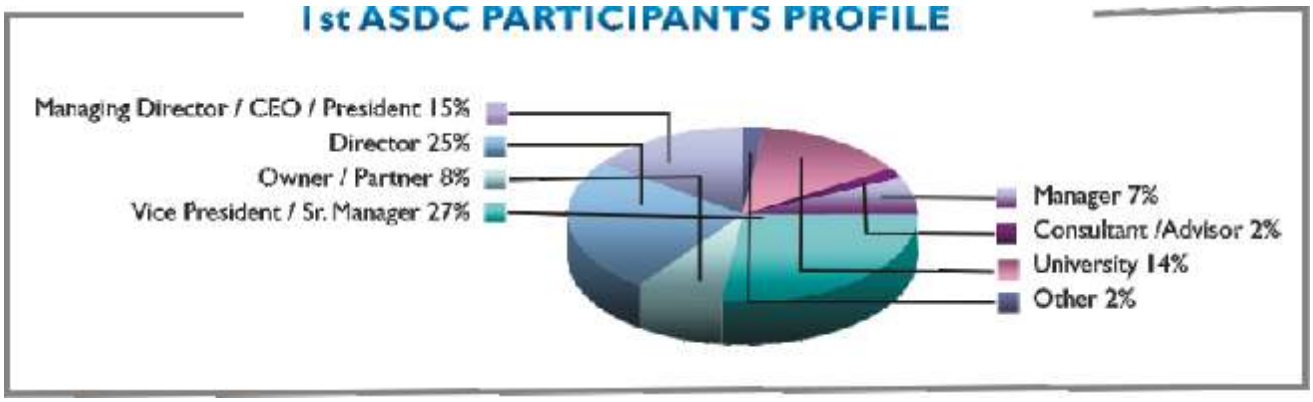
It is true that significant subsidies are given to agriculture in the developed countries and this supports a case for giving subsidies to Indian farmers. However, given our limited resources the subsidies need to be directed towards their most productive use. The savings from reduced input subsidies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

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

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

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

[Source: SEA NEWS CIRCULAR, Issue 1,Vol.:XI, APR.2008]



BUT WHERE IS IT?

India to push biofuel use in transport

Disregarding the consequences of the use of scarce land to grow biofuels on environment and food security, India is readying a national biofuel policy, which aims to set a target of meeting about 10% of total transport fuel with bio- fuels by 2017.

The policy is open to changes, but estimates suggest that 12 million hectares of land would have to be brought under biofuel crops to meet the target. This is roughly an area the size of Goa and Kerala put together.

Though the government has said that it would use only revenue and forest wastelands for plantations, the continues premium on biofuels is sure to cause consternation to the growing numbers who feel that the land resources should be harnessed solely for growing crops or animal feed.

A Group of Ministers, headed by agriculture minister Sharad Pawar, is expected to finalise the policy by the end of this month after being under discussion for almost a year.

The group will finalize its stance when the romance with biofuels seems to have some what soured because of the food crisis and the findings that they may worsen the problem of climate change.

Unlike the US and south east Asian countries, the policy will push for only non edible crops to be used for manufacturing biofuels. With the diversion of corn by US and palm in southeast Asia being partially blamed for a global food crisis, the stipulation on using non- edible plants is also a devise to deflect criticism of encouraging biofuels.

US plans to meet 30% of its transport fuel demand through biofuels by 2030. This means that huge quantities of corn and maize that US farmers produce will disappear from the international grain markets.

Even in India, food fuel issues are not likely to go away, particularly when farm productivity is low, capital investment is lagging and procurement problems could force government to look at imports.

India already has 600,000 hectares under jatropha plantations in AP, Rajasthan, MP and Chhattisgarh, which could provide 0.3 0.5 billion litres of biodiesel. India is also keen on using biofuels not only for producing fuel but also electrification. The first such biofuel electrified village has already come up in Chhattisgarh.

The policy would also create National Biofuel Board to spearhead the development of these fuels. It would be provided due legal backing with a law.

A subsidy fro biofuel growers could be a part of the policy, sources said. The policy also contemplates a subsidy structure to keep biofuels at parity with other fuels by adjusting excise and VAT. The government is also keen on keeping the biofuel sector completely domestic it will not be open to export and import which is seen as a measure to protect farmers from volatile international oil markets.

This is contrary to US plans which is working to a long term strategy of creating an international market with standardized biofuels that can be traded just like any other commodity. US is steadily moving towards second generation biofuels. Unlike the first generation technology, which uses sugar, starch, vegetable oil, or animal fats to make oil, the second generation technology is based on cellulosic biofuels from nonfood crops and is yet to reach a commercial scale.

Some experts have argued that developing countries like India should wait for second generation technology, which has a much smaller ecological footprint. But India is bound to focus on both ethanol and jatropha besides other crops on which research is still on.

[Source: Oils & Fats Today, Issue 8,Vol.:X, May 2008]

CAMELINA OIL

A rich source of Omega-3

A growing body of scientific research indicates that these healthy fats help prevent a wide range of medical problems, including cardiovascular disease, depression, asthma, and rheumatoid arthritis.

Unlike the saturated fats round in butter and lard, omega 3 fatty acids are polyunsaturated. The three most nutritionally important omega.3 fatty acids are alpha-linolenic acid, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

Traditionally Fish oil and Flax oil have been looked at major source for Omega 3 however with increasing demand for vegetarian food and very low srtability of Flax oil proposes us to look for other sources. Camelina oil being 100% Vegeterian and stable source is thus the most favoured upcoming source for OMEGA 3.

Revival of interest in camelina oil is due to its high linolenic acid (38%) content. linolenic acid is one of the OMEGA-3 fatty acids which are generally found in substantial commercial quantities only in linseed (flax) and fish oils.

Camelina offers an opportunity to supply the growing demand for high quality edible oils rich in OMEGA-3 fatty acids. The oil contains 35 to 40% linolenic acid compare to 8% in Canola and 1 % or less in soy bean and corn oils.

Camelina oil does not deteriorate during refining or storage like linseed (flax) oil or fish oil and can be used in a number of oil based products such as spreads and salad dressings. Camelina oil, unlike linseed and fish oil, is oxidatively stable and palatable

Canpressco producrts international (Canada) had pioneered the Camelina oil extraction technology. Canpressco being owned by a group of 5 farmers in Saskatchewan can guaranteethe traceability, and integrity of the Camelina oil. By using zero-tillage production systems, canpressco is able to produce this crop with the least amount of energy consumed.

OMEGA 3 MINUS THE FISHY ODOUR

Good news for those who hate cod but do not want to be den.ied by the heart healthy benefits offered by omega 3 from Fish oil. A plant OMEGA 3 called Alphalinolenic Acid (ALA) may be as potent as the fish type. ALA intake cuts the risk of suddern cardiac death almost in half, revealed in 16 year Harvard study of 77000 women.

All you need is 7 gm of ALA per week to gain its benefits. See box for sources :

FOOD SOURCE	**ALA**
CMELINAL OIL	**1Tbsp 1.9 G**
Canola (rapeseed il) 1 Tbsp	1.6v g
Walnut oil tbsp	1.4 g
Soyabean cooked 1 c	1.1 g
Soyabean oil 1 Tbsp	1.0 g
Wainut Tbsp	0.5 g
Hard tofu ½ cup	0.9 g

[Source: Oils & Fats Today, Issue 8,Vol.:X, May 2008]

THE MAGIC WAND !

Chefs of the future learn how to cut trans fat from menu

Providence, Rhode Island: The movement to ban artery-clogging trans fats from food has a new venue: cooking schools.

The places that train the people who will someday be feeding the rest of us are cutting back or eliminating artificial trans fats from their classrooms, saying they have a responsibility to teach students how to cook healthy foods.

“It's a very welcome change,” said john O'Connell, 19, a sophomore culinary arts student at Johnson & Wales University in Providence, one of the nation's largest cooking schools.

The school has started phasing out trans fats in its restaurants, hotels and dining services on four campuses around the country, and plans to be trans fat-free by the fall semester. “We have made sure that we do the right thing”. Said Karl J Guggenmos, dean of culinary education.

Other cooking schools, such as Le Cordon Blue Schools North America, with 13 locations, are looking at reducing or eliminating trans fats, said Kirk T Bachmann of Le Cordon Bleu, which is based in Hoffman Estates, Illinois. The prestigious Culinary Institute of America in Hyde Park, New York, banned trans fats from nearly all its classes and restaurants in 2005,

Artificial trans fats are often found in oils used to deep-fry foods such as French fries and in baked goods. Bakers like to use shortenings with trans fats because cakes stay fresher longer, frosting is easier to use, and they cost less than butter.

Trans fats are created when hydrogen is added to liquid cooking oils to harden them. Along with saturated fats, they raise levels of socalled bad cholesterol, increasing the risk of heart disease.

New York City banned cooking oils with trans fat from all restaurants last year, and several states and cities have debated similar measures. A number of fast-food restaurants chains are making the switch to trans fat-free cooking oils.

trans fat-free cooking oils.

At the Culinary Institute of America, trans fat is one of the "hot button" topics, said school spokesman Stephan Hengst. "Once they get out in the industry, they've got to understand it," he said of students.

Trans fats are banned at the school, Hengst said, except in advanced cake decorating classes where students work with trans fat-based shortening. But no one eats the cakes once they're decorated; they're thrown away

[Source: The Times of India
Dated 29.01.2008]

NOT JUST CHEWING

FENUGREEK GUM

Among agricultural plants useful as human-food, legumes stand next only to the grasses such as wheat, rice, maize and sugarcane. Food carbohydrates, produced from legumes, are more variable than those from grasses. The grasses mainly produce glucose polymers i.e. the starches and cellulose, besides hemicelluloses and sugars. Manu legume seeds additionally produce complex carbohydrates or the gums, e.g. those based on galactomannans and other heteropolysaccharides, which from their endosperm reserve polysaccharides. Because of the unique industrial applications, in food as well as non-food industries, legume galactomannans e.g. guar and locust bean gums have acquired great commercial value. There are many underutilized, tropical legume galactomannans that could be exploited as future resources, in developing countries. Fenugreek is one such annual legume crops, whose strongly scented seeds are source of a unique galactomannan gum. Other than fenugreek, cassia tora is another, emerging gum producing legume, which shall be covered by the authors, later in this magazine in another article.

Factors favoring commercialization of plant gums

A newly investigated polysaccharide gum is likely to be adopted for industrial production and use when

- It has some useful functional properties such as, being a good viscosity builder or, a good gelling agent, for which it is being considered fo commercialization.

- Gum cost is low and it is likely to be reasonably Constant for several years to come. Regarding cost factor, the galactomannans from annual Crops are cheaper compared to those from Full - grown ·trees and their supply is more sustainable.

- The supply of high quality product gum is well assured, particularly when there is an increased world demand. This again is true of gums from land-cultivated annual crops.
- When a gum is meant for human consumption, consideration for its acceptance as a food, cosmetics or drug additive by the government agency's act e.g. "Food and Drug Act" or the FDA in USA, becomes an important consideration.

About a decade ago, only three legume-seed gums namely,

1. Guar gum (from Cymoposis teteragonnolobous, annual crop),
2. Locust bean gum (LBG, from Ceratonia siliqua, tree) and
3. Tara gum (from Caesalpinia spinosa, shrub),

Produced commercially, were approved as food additives.

Whole fenugreek (botanical name Trigonella foenum-graecum, Hindi name **Methi**) seed is edible, and hence its isolated gum is the latest addition to the list of edible galactomannan gums, allowed as food additives. Guar and fenugreek are two annual crops, mainly cultivated in the Indian subcontinent. Locust bean and tara seed gums are derived from pods of evergreen, perennial trees or shrubs, which are grown in the costal Mediterranean regions of Europe and Africa, and costal Peruvian Andes mountain range of South America respectively.

Fenugreek Galactomannan (FG-gum): An emerging Industrial Polysaccharide

In his famous monogram on "Industrial Gums" (1993, 3rd Ed. Academic Press N.Y.) R.L.Whistler, mentioned that "Fenugreek seed-endosperm galactomannan was not in industrial production till

1990", but he suggested "There exist strong incentive to make dual use the seed by removing the spice and other components and separate the unique galactomannan, for which there is a good demand, as well as for the herbal products from fenugreek and its steroidal saponin, disogenin, which are in good demand for making sex hormone, cortisone used in making oral contraceptive". Like many other prophecies, made by Professor Whistler, regarding the future prospects of many underutilized plant polysaccharides, this prediction was soon to be fulfilled. Currently some industries have started producing and marketing a sizable amount of fenugreek gum, and other fenugreek based herbal products are finding increasing applications.

Since fenugreek is a widely grown annual agriculture crop, its sustainable supply is well assured. Besides the gum, fenugreek seed also contains fatty and spicy oils, saponins (Disogenin) and good quality of lysine rich, edible protein; thereby making it a cost-effective agricultural crop. According to the Ayurvedic and Unani Systems of Medicine, fenugreek seed has been used in condiments and as a spice component of food in India and the Middle- and Far-East for centuries. Non-toxic and innocuous nature of fenugreek seed has been used traditionally as a food additive and hence no fresh FDA approval, for its isolated gum use, is required. Considering these factors, the Research Branch of Agriculture Canada started a project to produce fenugreek crop of an improved seed yield. A breeding program to produce seeds yielding higher levels of saponins (diosgenin) from fenugreek seed was also undertaken in England. For India there is a need to start a breeding program to improve gum yield from fenugreek seed and this can be undertaken by any of the Indian Agriculture Research Council lab. Any improvement of seed quality and its yield can result in increased yield of most of the seed components and value of the crop.

Like many other legume seeds, fenugreek seed endosperm is composed of a galactomannan polysaccharide, which is variably referred by the terms 'fenugreek gum' , 'fenugreek galactomannan' and 'fenugreek polysaccharide', used interchangeably for its endosperm powder.

Dr.N.K Mathur* & **Dr.G.M.Mathur****
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**Rajasthan Agriculture University, Experimental Station, Sriganganagar, Rajasthan

[Source: AFST(I) Mumbai Chapter News Letter, Feb. 2008]

SOUND ADVICE

At the Culinary Institute of America, trans fat is one of the "hot button" topic, said school spokesman Stephan Hengst. "Once they get out in the industry, they've got to understand it," he said of students.

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[Source: The Times of India
Dtd. 29.01.2008]

PUMPKIN FACTS

The bright orange color of pumpkin is a dead giveaway that pumpkin is loaded with an important antioxidant, beta-carotene. Beta-carotene is one of the plant carotenoids converted to vitamin A in the body. In the conversion to vitamin A, beta carotene performs many important functions in overall health.

Current research indicates that a diet rich in food containing beta-carotene may reduce the risk of developing certain types of cancer and offers protect against heart disease. Beta-carotene offers protection against other diseases as well as some degenerative aspects of aging.

Pumpkin Nutrition Facts
(1 cup cooked, boiled, drained, without salt)

Calories 49	Zinc 1 mg
Protein 2 grams	Selenium 0.50 mg
Carbohydrate 12 grams	Vitamin C 12 mg
Dietary Fiber 3 Grams	Niacin 1 mg
Calcium 37 mg	Folate 21 mcg
Iron 1.4 mg	Vitamin A -2650 IU
Magnesium 22 mg	Vitamin E 3 mg
Potassium 564 mg	

Source: University of Illinois Nutrition Analysis Tool
Http://www.nat.uiuc.edu/mainnat.html

[Source: AFST, NEWS LETTER, FEB. 2008]

WOW !

INDIA DEVELOPS NEW COFFEE BEAN VARIETIES

The Central Coffee Research Institute (CCRI) has developed a new coffee bean variety which would be released by end 2007. After 21 years of research, the CCRI expects to release the new variety on December 15. The yet-to-be named hybrid, hi-yielding arabica variety is resistant to diseases such as leaf rust. The CCRI, located in Balehonnor, Karnataka is India's premier coffee cultivation research institute.

CCRI officials were quoted in local newspapers as saying that trials of the new variety were being conducted with some 500 growers across the coffee growing regions. The new variety yields about 30 per cent more coffee per hectare at 2,000 kg as compared to the other varieties in plantations like Kaveri, Hemavati and 795 among others.

In another development, the Central Food Technological Research Institute (CFTRI), Mysore has developed a new robusta coffee variety that has zero-level caffeine after six years of research.

Traditional robusta coffee contains about five to six per cent of caffeine and in the new variety the caffeine level is almost zero.

The genetically modified caffeine-less variety was handed over to the Coffee Board by CFTRI officials at Mysore recently.

The CCRI has also reportedly taken up the coffee genome sequencing project in collaboration with four other research institutes.

The Department of Biotechnology (DBT) funded project is currently being executed in collaboration with the Central Food Technology Research Institute, Mysore, The University of Agricultural Sciences, Bangalore, Madurai Kamaraj University, and the Centre for Cellular and Molecular Biology.

[Source: Food Industry India, 30 JULY, 2007.]

NO BIG DEAL

Solar Energy For Every One

As dusk slowly lapses into night, it is time for millions to call it a day. For, before the night falls, farmers with their cattle have to be at home, children have to finish studies, housewives have to finish the household chores, as life comes to a standstill once it is dark. 'Power on. India on' might be true in cities. But not for 400 million people in the vilages of India. Amit Chugh, managing director of Cosmoslgnite Innovation India, has already lined up innovative products using solar energy. Mightylight, a solar powered lamp is already in use in Orissa, Rajasthan and Jharkhand.

“We are not here for charity. Our market is the developing world where 1.6 billion people are forced to use fuel/ kerosene-based light,” said Chugh. Chugh claims that the light emitting diode (LED) technology that is being used by them is best suited to rural population due to its long life. “We have to cater to our customer base that is the rural India. Our R & D in 2003-2004 showed that a technology that is truly different and scalable is require. The technology was LED. It will not fuse for twenty years and is validated from the US department of energy, World Bank, and IFC,” said Chugh. The company's solar lights have brought a ray of hope to the lives of forest dwellers of Rhanthambore National Park who were rehabilitated in Kailashpuri (Rajasthan).

A similar initiative, though in a different model, is being taken by The Energy Research Institute (TERI).

The solar part is segregated from the lantern. A charging station is insulated at the village where villagers can come and get their batteries charges at an amount ranging from Rs. 3 to 5, varying from place to place. The villagers do not own the lamp, rather take it as and when required after paying the charging fee.

The distribution model if TERI is based on a sponsorship system. A corporate house can sponsor 50 lamp a village at Rs 300,000. TERI has recently got sponsorship for one villages each by

DFID and GE. Swiss Agency for Development cooperation and HSBC have sponsored two villages each i.e. 200 lamps. "We identify a village entrepreneur to run the battery charging stations. This creates employment for the individual," said Chaurey Akankasha, Associate Director, TERI.

Harish Hande, the founder of Solar Electric Company or SELCO and winner of the Social Entrepreneurship award this year, has found a unique model to popularize solar energy in 91,000 unit villages in Karnataka. His model for making solar light affordable is to tailor energy products to the need of the customer. So, if a family can afford to spend only Rs. 3,000 then he provides them a single light system. This is then upgraded gradually as and when the family is able to spend more.

Villagers, especially from hilly area except R & D programmes to reduce the cost of technology, to enhance acceptability.

[Source: Business Star, Vol XIX, No.4, April 2008]

AROMA !

Spice Oleoresins

Prospects Bright

Imponents present in most spices and provide the characteristics aroma of the spices. Spice oil is normally ndia is rightly called the spice bowl of the world. Supported by favourable climatic soil condition a variety of spices are grown in India. Spice oils are the volatile coextracted by steam distillation. Spice oils have the major advantages such as standardization, consistency and hygiene. The standard of quality expected in spice oil differs depending on its end uses. Therefore, these oils are custom-made to meet the exact requirement of the user. Spice oils are mostly used in food, cosmetics, perfumes and personal hygiene products like toothpastes, mouthwashes and aerosols, besides in a variety of pharmaceutical formulations. India is world's largest exporter of spices, spices pastes, spice essential oils and oleoresins.

Essential oils are the aromatic fractions of a spice (or other plants) derived by steam distillation. For the most part, spices are dependent on their essential oil content for their characteristic aromatic profile. Possible exceptions include, cayenne pepper, paprika, poppyseeds and sesame seeds. Other important components of a spice's flavor profile may be in the non volatile portion. For example black pepper's “heat” is in the non volatile portion.

Essential oils are sterile, free from extraneous materials, soluble in a variety of systems, stable under good storage conditions and represent up to 98 per cent savings in weight and storage space. As new avenues for industrial spice applications arise, a new technique for more effective, uniform spice extracts has arisen. Spices, oleoresins and essential oils are now shipped in dispersions of oil or other liquids.

Furthermore, dispersions can be standardized with other ingredients such as mono-di or tri glycerides or polysorbates all requiring strict kisher certification. Another technique for easier spice application is to make a liquid emulsion of spices, essential oils and a starch and spray dry the essential oil to a powder.

Advantages of Spice Oils

1. Represents the characteristic aroma of the plant part
2. Do not impart color to the end product
3. Provide uniform flavor profile
4. Free from enzymes and tannins
5. Microbiologically stable

Spices Oleoresins

Spice oleoresins are the concentrated liquid from the spices that reproduce the character of the respective spice fully. Oleoresins can be defined as the true essence of the spices and can replace whole/ ground spices without impairing any flavor and aroma characteristic. Oleoresins are obtained from spices by extraction with a non-aqueous solvent.

Spice Oleoresins are mainly used in processed meat, fish and vegetables, soups, sauces, chutneys and dressings, chesses and other dairy products, baked foods, confectionery, snacks and beverages, soft drinks, pharmaceutical preparations, perfumery soaps and tobacco. The demand of spice oleoresins in the developed countries is increasing day by day as more and more spicy snacks are being introduced by fast food chains with standardized tastes. India enjoys the distinction of being the single largest supplier of spice oleoresins to the world.

The spice oleoresins are especially suitable for such snacks in that they can be used very conveniently without any handling of the raw spice like ginger, chilli, onion, etc. and producing a standardized effect on taste.

Advantage of Spice Oleoresins

1. Uniform, standardized, wholesome flavor of the spice
2. Hygiene, free from filth and microbial contamination
3. Long shelf life
4. Less storage space etc.

Use of Oleoresins

1. Since this and extract of spice the amount of flavor ant the taste imparting constituents can be regulated. Hence specific amount of extracted

material will always provide the same degree of flavor strength and taste and thereby minimize differences encountered using spices for manufacture of food products.

2. Since Oleoresins are liquid or semisolids stored in air tight containers the loss of volatile essential oils is minimized.

3. Since a few kilos of oleoresins replace 100 kg. of spices the storage space is considerably reduced and also reduces the handling expenses, freight etc. Considerably.

4. The oleoresins are found to be free from viable bacteria, mold, fungus and other contaminants. It does not even support their growth. Hence no expenditure on sterilization is incurred and it can be stored for a number of years without deterioration.

5. The extractive is wholly available for perception and provides the use with greater economy since the use of spices must take into account this lack of constituents in the spices, roughly 50 percent saving in the cost can be realized and yet the flavor and taste effect in the food products will be maintained.

By: Kamal Joshi

[Source: BUSINESS STAR, Vol XIX, No.4, APR. 2008

THE TEASER SWOT

Conceptual summary on SWOT analysis of Indian oilseed sector and implicative strategies

Indian oilseed sector

Strengths

Diverse agro-ecological situations.
Strong research network.
Strong first-line extension system.
Strong public sector network for seed production.
Strong HRD facilities.
Initiatives from oil industry.

Weaknesses

Dependence on vagaries of monsoon.
Lack of adequate seed multiplication.
Lower seed replacement ratio.
Production under energy starved conditions.
Vulnerability to pests and diseases.
Gap in resistance breeding.
Resource poor farmers.
Weak infrastructure.
Technical inefficiency of oil industry.
Weak transfer of technology.
Lack of regulatory and trade policy support

Opportunities

Biotechnological options for genetically enhanced germplasm.
Huge exploitable yield reservoir.
Exploiting niche areas of oilseeds cultivation.
Value addition to oilseeds, oils and by-products.
Scope for improving efficiency of oilseed processing.
Exploiting supplementary sources of oil.
Extenstion of retail boom to oilseeds.

Threats

MSP support for competing crops.
Continuous cropping.
Aberrant weather.
Alarming demand for edible oil.
Lack of linkage to assured market.
High standards in the liberalized international trade

Implicative strategies

Public private partnership in varietal development.
Developing self-reliant seed supply mechanism.
Efficient input and MSP support for oilseeds.
Delineation and development efficient oilseed production zones.
Developing and promoting of situation specific IPM and INM packages.
Promotion of contract farming.
Exploitation of niche areas for oilseed expansion.
Value addition to oilseeds, oils and by-products.
Gap-specific extension strategies.
Providing effective market linkage.
Favourable policy framework for oilseeds.

Source: Oils & Fats Today, Issue 8, Vol X May 2008

RSDC CONFERENCE

2nd International Conference On Soaps, Detergents & Cosmetics

Kala Academy, Panjim, Goa, India. October12-15, 2008

LIST FOR CONFIRMATION OF SPEAKERS:

Paper No	Date	Time	Session Name	Speaker	Paper Name
SESSION I					
1	13th Oct.08	9:00am- 9:45am	Keynote Address	Mr.Nitin Paranjape , HUL	Industry Future-Opportunities & Challenges
2	13th Oct.08	9:45am-10:30am	Keynote Address	Mr.Norman Ellard, P&G	Sustainable Value Creation From Renewable Resources
SESSION II					
3	13th Oct.08	11:00am-11:30am	Marketing Dynamics	Mr.Willy Sutanto, Ecogreen Oleochemicals	Emerging Markets
4	13th Oct.08	11:30am-12:00pm	Marketing Dynamics	Mr.Schalk Veter, Akulu Marchon Pvt. Ltd.	Developing Markets-Americas
5	13th Oct.08	12:00pm-12:30pm	Marketing Dynamics	Mr.Brian Sansoni, SDA	Sustainable Markets-Americas
SESSION III					
6	13th Oct.08	2::00pm-12:30pm	Technology Innovations	Mr.Shyam Gupta, Bioderma Corpn	Cosmeceuticals and Neutraceuticals
7	13th Oct.08	2:30pm-3:00p,m	Technology Innovations	Dr.Manfred Hoffman, Lurgi GMBH	Innovations in Oleochemical Technologies
SESSION IV					
8	13th Oct.08	3:45pm-4:15pm	Ram Material Scenario	Dr. Mohd Basari Bin Wahid, MPOB	Oleochemicals Used in Soaps, Detergent and Cosmetics
9	13th Oct.08	4:15pm-4:45pm	Ram Material Scenario	Ms. Cathy Brenks, Cpchem	Petrochemical Based Detergent Alkylates
10	13th Oct.08	4:45pm-5:15pm	Ram Material Scenario	Mr. Tony Martin, Stepan Europe	Surfactants For Laundary & Personal Care
SESSION V					
11	14th Oct.08	9:00am-9:30am	Business Models	Mr. Shantanu Khosla, P&G,India	Sustainable Fabric and Home Care Products
12	14th Oct.08	9:30am-10:00am	Business Models	Speaker from Henkel	Sustainable Development In Europe
SESSION VI					
13	14th Oct.08	10:45am-11:15am	Products Dynamics	Dr. Carlos Lopex, Dow Chemicals, USA	I&I Cleaners
14	14th Oct.08	11:15am-11:45am	Products Dynamics	Dr.Rangarajan, Institute of Packaging	Packaging Using Renewables
SESSION VII					
15	14th Oct.08	1:15pm-1:45pm	Supply Chain Mechanics	Mr. Pradeep Banerjee, Unilever Ltd.	Supply Chain Dynamics in Asia
16	14th Oct.08	1:45pm-2:15pm	Supply Chain Mechanics	Mr.Pranab Barua, A.V.Birla Group	Retail Mechanics in India
SESSION VIII					
17	14th Oct.08	3:45pm-4:15pm	Regulatory and Environmental issue	Ms Y.Tsujimoto, P&G (AOSDS)	Regulatory issues : GHS & Labelling
18	14th Oct.08	4:45pm -5:45pm		Mr. Luls Spitz	A Presentation on "The History of Soap"

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Regional Conference On Soaps, Detergent & Cosmetics
October 12-15,2008, Goa, India.

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