



## **REFINE SOYBEAN OIL**

### **Indian scenario of soyabean oil.**

Soybean oil is the derivative of soybean. On crushing mature beans, 18% oil and 78-80% meal is obtained. While the oil is mainly used for human consumption, meal serves as the main source of protein in animal feeds. India is the World's largest importer of edible oils in the World. Of the total 5.0-5.5 million tons of vegetable oils imported, 1.3-1.5 million tons is soybean oil, imported mostly from Argentina, and followed by Brazil and US. In addition to imports, domestic production of around 0.7-0.8 million tons takes the annual soybean oil consumption of the country to 2.0-2.2 million tons, with a market value of Rs 8000 crore.

Crude and Refined soybean oils are permitted to be imported into India at an import duty of 45% and 50.4% respectively. Imports of soybean oil into India have been on a continuous rise since the past 6-7 years. It has witnessed a sharp rise from a mere 84,000 tons during 1996-97 to 1.54 million tons during 2001-02.

Indian edible oil market is highly price sensitive in nature. Hence, the quantity of soybean oil imports mainly depends on the price competitiveness of soybean oil vis-à-vis its sole competitor, palm oil. This also implies that soybean oil prices are highly influenced by palm oil prices in Malaysia, the market leader in palm oil production and exports.

In India, ready (spot) markets of Indore and Mumbai serve as the 'reference' market for soybean oil prices. While the Indore price reflects the domestically crushed soybean oil (refined and solvent extracted), Mumbai price indicates the imported soy oil price. Futures trading in soybean oil is also prevalent in many futures exchanges in the country, the prices of which are largely influenced by the international edible price movements (especially Malaysian palm oil and soybean oil at CBOT), soybean availability in domestic markets, demand for meal and other associated supply-demand factors of soybean and its derivatives.

Soybean oil is among the most vibrant commodities in terms of 'price volatility'. Its prominence in the international edible trade scene (9-10 million tons), concentration of production base in limited countries as against its widespread consumption base, its close link with several of its substitutes and its base raw material (soybean) in addition to its co-derivative (soya meal), the nature of the existing supply and value chain, etc throw tremendous opportunity for 'trade' in this commodity. The opportunity is further enhanced by the expected rise in consumption base and the consequent increase in imports of vegetable oils in the years to come. Futures trading in soybean oil would essentially serve as the right tool for hedging market-linked risk by all those in the value chain of the commodity- the soybean producing farmers, processors, brokers, speculators, soybean and meal traders, traders of other oilseeds and oils, etc.

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**Soybean & Soya Oil World Imports:** China, European Union, Japan, Mexico, Taiwan, Turkey, Egypt and South East Asia (Thailand, Indonesia etc) are major importers of soybeans while India, China, Pakistan, Bangladesh, Iran, South Korea, European Union - 27, South & Central American countries (Peru, Venezuela, Bolivia, Dominican Republic) and Africa (Egypt, Algeria, Morocco) are major buyers of soya oil in world market.

- **World Exports:** U.S. is the largest exporter of soybeans followed by Brazil, Argentina, Paraguay and Canada while Argentina is the biggest exporter of soy oil followed by Brazil and United States. Soybean oil is the most traded vegetable oil in international market after palm oil.

- **Futures Market:** Cbot in US is the biggest exchange for soybean and soybean oil. In India, ncdex is the major exchanges for this commodities while Dalian Commodity Exchange is major platform for soybean and soy oil futures in China.

- In Argentina, there is export tax of 35% on soybeans export while on soybean oil it is 32%. At present (August 2010), there is zero import duty on import of crude soybean oil in India while it is 7.5% for refined oil

## **Soya Crude oil quality**

MOISTURE 0.50% MAX. FFA 1.5% MAX., COLOUR 40, FLASH POINT 120\* C, ACID VALUE 6% MAX., IODINE VALUE 125 TO 140 WIJS

## **Proposed Specifications of SOPA**

**SOPA has proposed the following Specifications for Solvent Extracted Soy Oil (R.G. 1):**

**Description :**

**The oil should be from good quality Soybean seed by a process of Solvent Extraction. Solvent used should be food grade such as Hexane. The oil should be free from rancidity, adulterants, sediments, suspended impurities and separated water.**

□S.No.

Characteristics

Basis

Rebate

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Moisture

Imp. & Volatiles

0.25%

No Rebate

0.26 to 0.50%

Single Rebate

0.51 to 1.0%

Double Rebate

Above 1.0%

Buyer's Option

$\phi$

Colour            1/4" Cell Y+5R

40 Units

No Rebate

41 to 45 Units

Rs. 10/MT/Unit

Above 45 Units

Buyer's Option

3

Free Fatty Acid

1.50%

No Rebate

1.51 to 2.0%

Single Rebate

2.1 to 2.5%

Double Rebate

2.51 to 3.0%

Triple Rebate

Above 3.0%

Buyer's Option

4

Flash Point

110oC

No Rebate

109 to 100oC

Rs. 100/MT

Below 100oC

Buyer's Option

5

Phosphetides

2.10%

No Rebate

2.11 to 2.50%

Single Rebate

2.51 to 3.0%

Double Rebate

Above 3.0%

Buyer's Option

¢

Iodine Value



120 to 141

-

7

SAP Value

189 to 195

-

8

Refractive Index

1,4650 to 1,4710

-

## **Soybean oil composition**

Crude

Refined

Triglycerides (%) :

95-97

>99

Free fatty acids (%) :

0.3-0.7

<0.05

Phosphatides (%) :

1.5-2.5

0.003-0.0045

Unsaponifiables (%) :

1.6

0.3

-Sterols

0.33

0.13

-Tocopherols

0.15-0.21

0.11-0.18

-Hydrocarbons (squalene)

0.014

0.01

Trace metals

Iron (ppm) (%) :

1.3

0.1-0.3

Copper (ppm)

0.03-0.05

0.02-0.06

## **Vegetable Oil World Production & Consumption, Vegetable oil Major Importers & Exporters**

Vegetable Oil World Consumption: The vegetable oil world consumption for 2008-09 stood at around 130 million tons. The consumption has consistently been moving up due to good demand because of the increasing population as well increase of disposable income in developing economies. For 2010-11, the vegetable oil consumption forecasts is 144 million tons, increase of more than 10% over 2008-09 consumption.

**Major Consumers:** China is the largest consumer (around 25 million tons in 2008-09) followed by India. European Union, United States, Indonesia, Malaysia and Brazil are the other large consumers of vegetable oils.

**World Production:** The world production for 2008-09 stood for around 133 million tons while for 2010-11 it is estimated to be 145 million tons.

**Main Producers:** Indonesia, Malaysia are the major producers of palm oil whereas United States, China, Argentina and Brazil are main producers for soybean oil. Eu-27 and India are other main producers for vegetable oils.

**Major Vegetable Oil:** Palm oil has the biggest share in vegetable oil market with 2008-09 consumption standing at around 42.5 million tonnes followed by soybean oil at 36 million tons. Rapeseed, sunflower, peanut, cottonseed, coconut and olive are other major vegetable oils used worldwide.

**International Market:** The international market for vegetable oil for 2008-09 was for around 56 million tons and increasing day by day. For 2010-11 it is estimated to be around 60 million tons.

**Major Traded Oils:** Palm oil is the internationally most traded vegetable oil with more than 60% of the total veg. oil traded in world market being palm oil followed by soybean oil. Sunflower,

rapeseed and coconut oil are other oils traded in world market.

Major Exporters: Indonesia (18 mmt in 2008-09) and Malaysia (16.5 mmt) are major exporters of vegetable oil. Argentina, Ukraine, Canada, United States and Brazil are other suppliers to world market. Asian nations exports palm oil while American countries major export is of soybean, sunflower and canola (rapeseed) oil.

Major Importers: China (around 10 million tons in 2008-09) is the world's biggest importer of vegetable oil followed by India (9 mmt). EU-27, United States and Asian nations are other major buyers.