

## Presentation on Vegetable oils vis-a vis Soybean in India



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## Demand and Supply of Vegetable Oils in India

(Million tonne)

Year	Total domestic demand	Domestic availability	Import	Import as % of total domestic demand	Value of import (Rs Cr)	Per capita availability (kg/yr)
2012-13	19.82	9.23	10.81	54.54	53562	15.80
2013-14	21.06	10.08	10.98	52.14	44038	16.80
2014-15	21.71	8.95	12.71	58.54	64894	18.30
2015-16	24.04	9.19	14.85	61.77	68677	19.10
2016-17	24.75	10.75	14.00	56.57	73048	18.75
2017-18	25.88	10.52	15.35	59.31	74996	19.30

Source: Department of Sugar & Vegetable Oils; DG, CI&S, Dept of Commerce, Kolkata

ICMR recommendation i.e. 30 g/person /day  
 Per capita requirement by 2022

: 10.95 kg/person/year  
 : 21.55 kg/person/year

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## India's Agricultural Imports..

(Value: in Rs Crore)

Sl No	Major items	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Vegetable Oils	6127	56836	64890	68677	73039	74996
2	Pulses	13345	12793	17063	25619	28523	18748
3	Fresh Fruits	6180	7716	9567	11072	11291	12525
4	Cashew	5434	4668	6600	8701	9027	9134
5	Cotton	2467	2376	3102	2566	6339	6306
6	Sugar	3094	2287	3668	4038	6869	6036
7	Spices	2716	3452	4393	5400	5760	6378
8	Wheat	6	27	61	873	8509	2358
9	Coffee	796	729	930	802	927	997
10	Fruits/Vegetable Seeds	471	449	612	703	653	764
<b>India's total agri &amp; allied import</b>		<b>95719</b>	<b>85727</b>	<b>121238</b>	<b>140311</b>	<b>164681</b>	<b>152061</b>

Source: DoC

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## India's Agricultural Export

(Value: in Rs Crore)

Sl No	Major items	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Rice -Basmati	19409	29292	27587	22719	21513	26841
2	Buffalo Meat	17409	26458	29283	26684	26161	25988
3	Rice(other than Basmati)	14449	17795	20442	15483	16930	22927
4	Spices	15177	15146	14848	16630	19111	20013
5	Castor Oil	4310	4364	4710	4616	4522	6730
6	Coffee	4711	4799	4973	5125	5646	6245
7	Cashew	4067	5095	5566	5028	5279	5945
8	Cotton	20277	22338	11643	12821	10907	12155
9	Sugar	8576	7179	5329	9825	8660	5228
10	Oil Meals	16520	17070	8129	3600	5410	6968
<b>India's total agri &amp; allied export</b>		<b>227193</b>	<b>262779</b>	<b>239471</b>	<b>215396</b>	<b>227554</b>	<b>250272</b>

Source: DoC

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### India's Export of oilseed and vegetable oil Products

(Quantity: lakh tonnes) (Value Rs. Crore)		
Commodities	2015-16 (P)	
	Quantity	Value
Oil meals	65.78	16,519
Castor oil	5.65	4,309
Groundnut	5.42	4,075
Sesame seeds	3.28	3,012
Other oil seeds	2.05	964
Vegetable oils	0.30	522
Niger seeds	0.14	123
<b>Total</b>	<b>82.64</b>	<b>29,527</b>

Source :Dept of Commerce

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### Primary sources of oil production and contribution (2016-17)

Name of oil	Domestic oil production (million tonne)	% Contribution in total domestic production
Rapeseed-Mustard	2.47	23.01
Soybean	2.21	20.56
Groundnut	1.71	15.96
Sesame	0.25	2.27
Sunflower	0.08	0.74
Niger	0.02	0.22
Safflower	0.02	0.20
<b>Total Edible oils:</b>	<b>6.76</b>	
Castor ( non-edible )	0.50	4.64
Linseed ( non-edible )	0.04	0.36
<b>Total Non-edible oil:</b>	<b>0.54</b>	<b>-</b>
<b>Total Primary Sources:</b>	<b>7.30</b>	<b>68.00</b>
<i>Source: Dept of Commerce</i>		

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### Secondary sources of oil production and contribution (2016-17)

Name of oil	Domestic oil production (million tonne)	% Contribution of total domestic production
Cotton seed	1.22	11.38
Rice Bran	1.03	9.59
Coconut	0.52	4.83
Palm oil	0.23	2.13
Solvent Extracted Oils	0.29	1.67
Tree & Forest Origin	0.15	1.39
<b>Total secondary sources</b>	<b>3.44</b>	<b>31.00</b>
<b>Total: Primary + Secondary sources</b>	<b>10.75*</b>	<b>-</b>
* Includes export & industrial use (0.65 million tonne)		
Source: Dept of Commerce		

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### Area, production and yield of oilseed crops

Crops	Average (2012-13 to 2016-17)			% Contribution in output of	
	Area (million ha)	Prod. (million tonnes)	Yield (kg/ha)	Oilseeds	Oil
<b>Edible</b>					
Soybean	11.28	11.85	1055	39.90	30.00
Rapeseed & Mustard	6.12	7.39	1207	24.88	34.00
Groundnut	4.98	7.22	1440	24.31	23.00
Sesame	1.76	0.77	439	2.60	3.00
Sunflower	0.59	0.40	690	1.36	1.00
Safflower	0.16	0.09	562	0.30	<1.00
Niger	0.27	0.09	320	0.29	<1.00
<b>Non-Edible</b>					
Castor	1.06	1.75	1660	5.88	7.00
Linseed	0.29	0.15	506	0.49	<1.00
<b>Total</b>	<b>26.49</b>	<b>29.71</b>	<b>1121</b>	<b>100</b>	<b>100</b> <sup>8</sup>

<b>Area, Production and Yield of Oilseeds</b>
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Year	Area (million ha)	Production (million tonnes)	Yield (Kg /ha)
2012-13	26.48	30.94	1168
2013-14	28.00	32.75	1168
2014-15	25.60	27.51	1075
2015-16	26.08	25.25	968
2016-17	26.18	31.28	1195
2017-18#	24.64	31.30	1270
2018-19##	17.59	22.18	1261
*#DES 4 <sup>th</sup> Adv Est; ## 1 <sup>st</sup> Adv Est (K)			

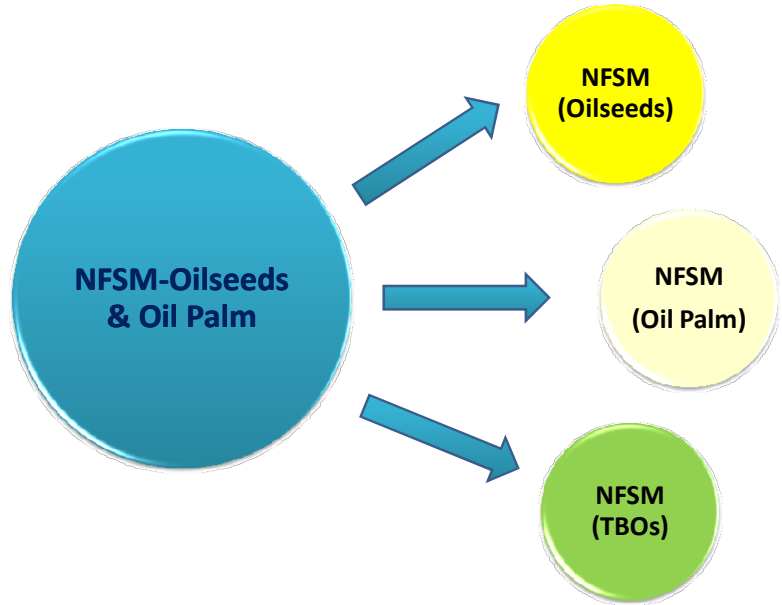
**Crop wise area , production & yield of oilseed crops**

Crops	Average (2012-13 to 2016-17)			% contribution in production
	Area (lakh ha)	Prod.(lakh tonnes)	Yield (kg/ha)	
<b>Edible</b>				
<b>Soybean</b>	112.78	118.53	1055	39.90
<b>Mustard</b>	61.15	73.92	1207	24.88
<b>Groundnut</b>	49.80	72.22	1440	24.31
<b>Niger</b>	2.69	0.86	320	0.29
<b>Safflower</b>	1.57	0.89	562	0.30
<b>Sesame</b>	17.59	7.72	439	2.60
<b>Sunflower</b>	5.85	4.04	690	1.36
<b>Non Edible</b>				
<b>Castor</b>	10.55	17.47	1660	5.88
<b>Linseed</b>	2.86	1.45	506	0.49
<b>Total</b>	<b>264.85</b>	<b>297.10</b>	<b>1121</b>	<b>100</b>

**State wise Contribution in Oilseeds**

States	% Contribution in Production
Madhya Pradesh	27.05
Rajasthan	19.67
Maharashtra	16.39
Gujarat	14.90
Uttar Pradesh	3.31
Haryana	2.88
West Bengal	2.88
Karnataka	2.47
Andhra Pradesh	2.42
Others	8.03
<b>Total All India</b>	<b>100.00</b>

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**NMOOP: From 2018-19 subsumed with NFSM as NFSM-Oilseeds & Oil Palm**

**Target by 2022**


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**Mini Mission I :  
OILSEEDS**




↓

**Mini Mission II :  
OIL PALM**



↓

**Mini Mission III :  
TBOs**



Oilseed production 45.00 Million Tons & 1500 kg/ha yield	To cover additional area of 1.00 lakh ha	10000 ha under TBOs
<b>Vision: To increase the domestic availability of vegetable oil</b>		

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**Projection of Demand and Supply by 2022-23**

Sr No	Item	2022-23
1.	Expected population (billion)	1.34
2.	Per capita consumption (kg/annum/year)	21.55
3.	Vegetable oil requirement for consumption (million tonne)	28.88
4.	Vegetable oil requirement for industrial use (million tonne)	4.12
5.	<b>Total vegetable oil requirement (million tonne)</b>	<b>33.00</b>
6.	Vegetable oil production from primary sources (million tonne)	10.44
7.	Vegetable oil production from oil palm (million tonne)	0.40
8.	Vegetable oil availability from secondary sources (million tonne)	5.50
9.	<b>Total vegetable oilseeds requirement from 9 annual oilseed crops (million tonne)</b>	<b>45.00</b>
10.	<b>Total vegetable oil availability from primary and secondary sources</b>	<b>16.34</b>
11.	<b>Dependence on imports</b>	<b>16.66</b>

### Vision for Vegetable Oils Sector

- Increase production of oilseeds from 30.64 million tonne in 2017-18 to 45.00 million tonne (primary sources) by 2022-23.
- Increase production of oils from 10.52 million tonne in 2017-18 to 16.34 million tonne (primary and secondary sources) by 2022-23.
- Increase palm and coconut oil production from 0.80 million tonne in 2016-17 to 1.00 million tonne by 2022-23
- Minimize edible oil import and save foreign exchange
- Maintain balance between market price and import duty
- Enhance export incentives on oil, cake and oilseed commodities

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### Strategies for Enhancing Vegetable Oil Production

- **Area expansion of oilseeds crops**
  - ✓ Utilizing rice fallow areas under oilseeds
  - ✓ Extending to non-traditional areas and non-traditional seasons
  - ✓ Targeting 100 potential districts
  - ✓ Additional area through inter-cropping
- **Area expansion of oil palm & coconut**
- **Productivity enhancement**
  - ✓ Enhanced seed production & distribution
  - ✓ Establishment of oilseeds Seed Hub
  - ✓ Promotion of new varieties through minikits /FLDs/CFLDs
  - ✓ Providing protective irrigation
  - ✓ Improved management practices
- **Pricing, procurement & duty structure**
- **Enhanced capacity utilization of oil industry**
- **Encouraging oil extraction & value chain**
  - ✓ Establishment of small oil extraction units

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### NFSM- Oilseeds



Polythene mulch demon. on Groundnut



Broad bed furrow planting of soybean



Plant protection of Rapeseed & Mustard



Broad Bed Ridge Method groundnut

### Technical interventions under NFSM-Oilseeds



Thinning in sunflower



Intercropping of arhar in soybean



Intercropping of arhar in sunflower



Pheromone traps



Sprinkler in G.nut

### National Mission on Oilseeds and Oil Palm (NMOOP) Mini Mission-I (Oilseeds)



BBF in Soybean



Seed cum fertilizer drill



Power Weeder



Knapsack Sprayer

### FARM MECHANIZATION



Rotavator



Motorized chisel



Multi crop Thresher



Power Sprayer



Tractor Operated Sprayer

### Existing import duty structure

Items	Applied Duty	
	Crude	Refined
Oilseeds	30% (except soybean-45%)	
<b>Soybean Oil</b>	35%	45%
Groundnut Oil	35%	45%
Palm Oil	44%	54%
Sunflower Oil	35%	45%
Mustard/rapeseed Oil	35%	45%
Coconut Oil	35%	45%
Olive oil	35%	40%
Cotton seed oil, safflower seed oil, saffola oil, coconut oil, palm kernel, Babassu oil, linseed oil, maize corn oil, castor oil, sesame oil, other fixed veg fats and oils	35%	45%

Source: DGFT &amp; DoR

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### Capacity Utilization of Oil Industry

Category	No of units	Processing capacity (million tonne/year)	Capacity utilization (%)
Oil mills	15000	36.00	20-30
Solvent extraction plants	600	31.00	40
Vegetable oil refineries	465	20.00	50
Vanaspati units	250	3.00	40

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## SOYBEAN



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## GLOBAL SCENARIO OF SOYBEAN (2013-2016)

Country	Avg. Area (lakh ha)	Avg. Production (lakh tonnes)	Avg. Yield (Kg/ha)
USA	324.01	1010.74	3119
Brazil	310.22	918.00	2959
Argentina	194.30	558.35	2874
China	68.33	120.83	1768
India*	114.92	103.27	899
Paraguay	32.00	87.45	2733
Canada	20.87	58.29	2794
Ukraine	17.64	35.35	2004
Uruguay	11.77	28.30	2405
Russia	17.38	22.35	1286
Others	54.24	98.32	1813
World	1164.84	3030.62	2602

Source: FAO/USDA. \*As per the estimates of DES, DAC&amp;FW

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### SOYBEAN SCENARIO 2017-18 & 2018-19

State	Area (lakh ha)		Production (lakh tonnes)		Yield (Kg/ha)	
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
MP	50.10	52.38	53.21	67.30	1285	1285
Maharashtra	38.40	39.29	38.88	43.88	1117	1117
Rajasthan	8.86	10.12	10.69	14.74	1457	1457
Telangana	1.52	1.73	2.47	2.81	1624	1624
Karnataka	2.76	2.72	2.29	3.27	1200	1200
Others	3.07	3.35	2.26	2.58	1052	1232
All India	104.71	109.59	109.80	134.58	1049	1228

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### Productivity potential of Soybean under FLD (2012-13 to 2015-16)

State	No. of FLDs	Seed Yield in FLD (kg/ha)	SAY (kg/ha)	%increase over SAY	NAY (kg/ha)	WAY* (kg/ha)
Chhattisgarh	40	1657	954	73.7	1163	2620
Gujarat	45	1665	810	105.6		
Jharkhand	80	1262	931	35.6		
Karnataka	380	1899	952	99.4		
Madhya Pradesh	1596	1462	1110	31.7		
Maharashtra	384	1972	1247	58.2		
Manipur	45	1506	705	113.7		
Punjab	60	1620	NA	NA		
Rajasthan	329	1550	1230	26.0		
Tamil Nadu	40	1283	NA	NA		
Telangana	40	1995	1482	34.6		
<b>Total/Mean</b>	<b>3039</b>	<b>1595</b>	<b>1163</b>	<b>37.1</b>		

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**POTENTIAL DISTRICTS (60) OF SOYBEAN**

State	Potential district (>50,000 ha area)
Madhya Pradesh (30)	Ujjain, Sehore, Dewas, Dhar, Shajapur, Sagar, Vidisha, Harda, Indore, Rajgarh, Chhindwara, Betul, Mandsaur, Hoshangabad, Guna, Ratlam, Raisen, Bhopal, Narsingpur, Shivpuri, Seoni, Neemuch, Khandwa, Ashoknagar, Damoh, Tikamgarh, Jhabua, Khargone, Satna, Chhatarpur
Maharashtra (20)	Amravati, Nagpur, Latur, Buldhana, Yavatmal, Nanded, Washim, Hingoli, Akola, Wardha, Kolhapur, Sangli, Chandrapur, Parbhani, Satara, Ahemdnagar, Jalna, Beed, Osmanabad
Rajasthan (5)	Jhalawar, Baran, Pratapghad, Kota, Bundi
Chhattisgarh (1)	Rajnandgaon
Karnataka (2)	Belgaum, Bidar
Telangana (2)	Adilabad, Nizamabad

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**STATE WISE YIELD GAP UNDER FLDs**

State	SAY (kg/ha)	FLD – Kharif-2013 (kg/ha)	Yield Gap (%)	Varieties used in FLD during Kharif 2013
MP	831	1347	62	JS-95-60, JS-97-52, JS-93-05, MACS-1188, MACS-1281, NRC-7, , NRC-37, NRC-86, JS-335
Maharashtra	1349	2213	64	MAUS-81, MAUS-61-2, MACS-450, MACS-1188, MACS-1281, KDS-344, RKS-18, JS-335,
Rajasthan	829	1469	77	RKS-45, JS-95-60, JS-335, JS-93-05
Mean	1003	1661	65	

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## MSP of Soybean

Year	MSP (Rs./Qt.)
2013-14	2560
2014-15	2560
2015-16	2600
2016-17	2775
2017-18	3050
2018-19	3399

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## Export of Soybean and by products 2015-16 to 2017-18

Qty.in tonns/value in Rs. crore

Commodities	2015-16		2016-17		2017-18	
	Qty.	Value	Qty.	Value	Qty.	Value
Soybean crude oil	40.37	0.33	36.46	0.22	193.00	1.46
Edible Soybean oil	1382	10.60	175	1.52	1016	8.09
Soya Meal	56618	232.38	144011	545.95	229882	789.97
Solvent extracted oil cake	6371	21.05	55308	158.75	146954	386.92
Solvent extracted Meal	285268	1034.82	833058	2327.34	1218605	3176.15
Others from Soybean	64729	231.94	243799	699.63	299011	777.37
<b>Total</b>		<b>1531.12</b>		<b>3733.41</b>		<b>5139.96</b>
Total export of oil Meal & cake		16016		18256		15253

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## Import of Soybean and by products 2015-16 to 2017-18

Qty. in tonne/ Value in Rs. crore

Commodities	2015-16		2016-17		2017-18	
	Quantity	Value	Quantity	Value	Quantity	Value
Soybean crude oil	3964009	1941.90	3464460	1870.34	3152168	1648.88
Edible Soybean oil	21.78	5.20	23.73	0.69	112.24	1.67
Soya Meal	33.19	0.65	2109	8.86	4057	14.85
Solvent extracted oil cake	4237	12.64	4628	13.88	0	0
Solvent extracted Meal	135.00	0.35	3049	9.40	500.00	1.94
Others from Soybean	1836.64	5.40	24687	70.95	48.91	0.78
<b>Total</b>		<b>1966.14</b>		<b>1974.12</b>		<b>1668.12</b>

*Thank You*



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