

## 2.0 Vision

Considering the growing domestic demand for edible oils, the staggering deficiency and the cost to the exchequer on account of imports, the urgency of scaling up the oilseeds production does not need over-emphasis. It has now been planned to achieve a production of 45.64 million tonnes (mts) from nine (9) annual oilseed crops by 2022-23, expecting an additional production of about 15.58 mt over and above the 30.06 mt production (QE 2016-17) (Table 5). Thus, the availability of total vegetable oil from domestic production of nine annual oilseed crops would be about 13.69 mts by 2022 (at 30 per cent recovery) as against the current annual output of 7.0 mts.

**Table 5: Status and anticipated area, production and yield of oilseed crops in India**

Crop	Quinquennium ending 2016-17			Year 2022		
	Area (m. ha)	Production (m. tons)	Yield (tons/ha)	Area (m.ha)	Production (m. tons)	Yield (tons/ha)
Soybean	11.38	11.94	1.05	12.50	18.75	1.50
Groundnut	4.99	7.39	1.47	5.72	9.72	1.70
R & M	6.19	7.39	1.19	7.47	11.95	1.60
Sunflower	0.59	0.44	0.75	0.97	0.87	0.90
Safflower	0.16	0.08	0.53	0.27	0.22	0.80
Sesame	1.75	0.77	0.41	1.97	1.18	0.60
Niger	0.26	0.08	0.32	0.32	0.16	0.50
Castor	1.06	1.80	1.70	1.40	2.45	1.75
Linseed	0.28	0.14	0.49	0.57	0.34	0.60
<b>Total</b>	<b>26.67</b>	<b>30.06</b>	<b>1.13</b>	<b>31.20</b>	<b>45.64</b>	<b>1.46</b>

*Source: DFI Committee Estimates based on data compiled from DACNET*

### 2.1 Anticipated area, production and yield

The total vegetable oil requirement in the country in 2022 has been estimated to be 33.20 million tonnes assuming per capita consumption of more than 22 kg per person per annum. The anticipated vegetable oil production from 45.64 million tonnes of oilseeds in the year 2022 is 13.69 million tonnes. The anticipated area, production and yield of oilseed crops by 2022 is given in Table 6.

The vegetable oil availability from secondary sources such as coconut, cotton seed, rice bran, solvent extracted oil (SEO) and tree & forest origin has been estimated at 5.22 million tonnes by 2022 (Table 7). As a sequel, the anticipated vegetable oil availability (primary + secondary + oil palm) would be around 17.03 million tonnes indicating the possible reduction in imports to the tune of about 15 per cent from the present 67 per cent by 2022. This would be an impressive achievement of reduction in import burden to an extent of about Rs. 15,000 crore vis-à-vis present status of import.

**Table 6: Anticipated area, production and yield of oilseed crops by 2022**

<b>Year</b>	<b>Area million ha</b>	<b>Production million tonnes</b>	<b>Yield kg/ha</b>
2015-16 (base year)	26.09	25.25	968
2016-17	26.22	32.10	1225
2017-18	27.57	35.50	1288
2018-19	28.50	38.00	1335
2019-20	29.41	40.50	1379
2020-21	30.30	43.10	1423
2021-22	31.20	45.65	1500

**Table 7: Assessment of vegetable oil requirement for 2022**

<b>Item/Year</b>	<b>2022</b>
Expected population (billion)	1.34
Per capita consumption (kg/annum)	21.70
Vegetable oil requirement for direct consumption (mt)	29.08
Vegetable oil requirement for industrial use (mt)	4.12
<b>Total vegetable oil requirement (mt)</b>	<b>33.20</b>
Vegetable oil production from annual oilseeds	11.41
Vegetable oil production from oil palm	0.40
Vegetable oil availability from secondary sources (mt)	5.22
Total vegetable oilseeds requirement from 9 annual oilseed crops (mt)	45.64
<b>Total vegetable oil availability from primary and secondary sources including oil palm</b>	<b>17.03</b>
<b>Dependence on imports</b>	<b>16.13</b>

*Source:DFI Committee Estimates*

It is known that excessive consumption of oil is not good for health. Unfortunately, those with affordable purchasing power and lack of knowledge relating to regulated consumption of vegetable oils, tend to increase their consumption. It is hence essential and also possible to reduce the consumption of vegetable oils by creating awareness among the consumers about optimum & healthy oil consumption habits. As per nutritional requirement, 12-13 kg per person per annum is sufficient, while an Indian is consuming more than 18 kg per person per annum. The excess consumption habits can be normalized by educating the consumers through electronic & print media, mobile apps, advertisements, nutritional camps, general education etc. It is against this backdrop, that, the strategies for enhancing the productivity and profitability of oilseed based production system are prepared for the annual oilseeds in the country.

### **3. STRATEGIES**

### 3.0 Strategies

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The strategies for enhancing the productivity (and profitability) of oilseed based production system are prepared for the annual oilseeds and for oil palm in the country. The interventions/ strategies proposed in oilseeds are time tested with scale neutrality that can be grounded for enhancing the productivity of the oilseed based production system with necessary institutional support/ handholding. The proposed strategies are categorized under three situations as follows.

1. Increasing seed production and distribution of newly released varieties.
2. Low cost technologies with high impact on productivity resulting in higher income.
3. Technologies with high impact that involve reasonable investment with high return on investment (ROI), with emphasis on eco-friendliness, high input use efficiency, and
4. Strategies with emphasis on quality improvement and value addition leveraging technologies with a bearing on the employment through skill/ entrepreneurship development.

The newer opportunities to explore non-traditional seasons and regions for crops are also projected that have proven success for area expansion and integration into major cropping systems.

#### 3.1 Yield gap analysis

There exists a tremendous potential for enhancing the yield of nine oilseed crops by adopting the technologies already available. This contention is based on the results of 23,118 frontline demonstrations (FLDs) ( 2010-2015) conducted on nine oilseeds crops under real farm situations in different agro-ecological conditions of India over a period of five years. The productivity (yield) gap between improved technology and farmers' practices ranged from 21 % in sesame to 149 % in sunflower (Table 8).

**Table 8. Productivity potential (kg/ha) of improved technology of oilseeds.**

<b>Crop</b>	<b>Improved technology Yield (kg/ha) (IT)*</b>	<b>National Average Yield (kg/ha) (NAY)**</b>	<b>Increase in IT over NAY (%)</b>
Groundnut	2264	1439	57
Soybean	1603	1182	36
R-M	1692	1181	43
Sunflower	1742	700	149
Sesame	536	441	21.5
Safflower	1061	567	87.1
Niger	406	313	29.7
Castor	2032	1647	23.4
Linseed	1090	484	125.2
Mean	1541	1019	51.3

Bridging yield gap across oilseeds can increase oilseeds production significantly that would concomitantly reduce the dependence on imports of vegetable oil besides realising higher profitability to oilseed farmers.

\* IT – Improved Technologies

\*\* National Average Yield