ANALYSIS OF OILSEED CROPS SCENARIO IN RAJASTHAN

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INTRODUCTION

Oilseed production occupies an important position in the Indian agriculture economy as a backbone since long. India is the fourth largest oilseeds producers in the world, next to USA, China and Brazil, accounting for about 12-15 percent of the area and 8.5 percent of the world's oilseed production and 9-10 percent of the total edible oils consumption. The Indian climate is suitable for the cultivation of oilseed crops; therefore, large varieties of oilseeds are cultivated.

Oilseed area and output are concentrated in the central and southern parts of India mainly in the state of Madhya Pradesh, Gujarat, Rajasthan, Andhra Pradesh and Karnataka. The major oilseed cultivated in our country are Groundnut, Rape/Mustard, Soybean, Sesame, Castor, Linseed, Safflower, Sunflower and Niger accounted for an area of 256.01 Lac ha with the production 275.01 Lac tons. In terms of acreage, production and economic value, oilseeds are second only to food grains. The country produces 14.9% Groundnut and 10.7% Rapeseed with second and third rank respectively (GOI 2016).China has first rank in Production and yield of Groundnut. India rank first in the production of most of the minor oilseed (Castor, Safflower, and Niger) and second in Groundnut and Sesame. The area, production and Yield of oilseed grew at a compound annual growth rate of 1.58 percent, 3.05 percent and 1.45 percent, respectively, during the period 1951 to 2009-10. Among the oilseed crops, the growth rate in area and production was the highest for Soybean 10.73% and 12.72%, respectively (Swain S 2013). As per the fourth advance estimate for 2015-16, the production of total nine oilseed crops is a quantum jump over previous year's production. Oilseed crops play the second important role in the Indian agriculture economy next to food grains in terms of area and production. At present, more than 27 million hectares of land is under oilseeds cultivation. The area under oilseeds has been increasing over time and the production has registered many fold increase but its productivity is still low as compared to other oilseed producing countries in the world. To improve the situation of oilseeds in the country, government of India has been pursuing several development programs. They are oilseed Growers Cooperative Project, National Oilseed and Development Project, Technology Mission Oilseeds (TMO) and integrated scheme of oilseeds. These development programs/schemes register significant improvement in annual growth of yield and area under oilseed crops in mission period and the highest growth was observed in the case of Soybean and Sunflower oilseeds. The expansion of irrigation facilities and transfer of new technologies also help to obtain the desired results (Narayan P et al. 2011).

The Oilseeds account for 13% of the Gross cropped area, 3% of the Gross National Product (GNP) and 10% value of all the agricultural commodities. The annual growth rates of area (2.44%), production (5.4%) and yield (2.96%) of Oilseed crops during 2009-2019 have declined as compared to that of 1996-2008 (Area: 3.05%, Production: 6.36% and Yield: 3.73%). As per fourth advance estimates an ever highest production of 328.77 Lakh tons of oilseeds with a productivity level of 1153 kg/ha has been recorded during 2018-19 due to favorable weather conditions coupled with support from the Government to the Oilseeds production programmers and policies (GOI Krishi Bhavn Delhi 2019).

A wide range of oilseed crops are grown in different agro-climatic regions of Rajasthan. Among the oilseeds, groundnut which was the most important crop in TE 2018-19 in the country has lost its prime position to Soybean in TE 2018-19. Soybean is largely grown in Madhya Pradesh, Maharashtra and Rajasthan, accounting for 95% of total production in the country (Table). The second most important oilseed crop is Groundnut, which is grown mainly in Gujarat, Andhra Pradesh, Tamil Nadu and Rajasthan. The third major oilseed crop, Mustard, is grown in Rajasthan, Uttar Pradesh and Haryana (Table). The production of these three crops accounted for 87% of total oilseed production in the country. The other edible oilseeds are Sunflower, Sesame and Castor seed. Andhra Pradesh and Maharashtra are major Sunflower producing states while West Bengal, Gujarat and Rajasthan are major Sesame and Castor producing state.

Table : Area, Production and Yield of oilseed crops during 2014-15 to 2019-20

Crop		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Ground nut	Area	326.03	349.33	418.11	397.81	466.31	500.82
	Production	371.17	681.08	805.27	616.35	907.38	1011.12
	Yield	1138	1950	1926	1549	1946	2019
Rape/Mustard	Area	2212.34	2489.89	2441.25	2724.96	2782.54	2433.78
	Production	2912.29	3883.30	2950.31	3759.94	3620.85	2878.94
	Yield	1316	1560	1209	1380	1301	1183
Linseed	Area	3.26	1.74	1.21	1.06	2.11	2.56
	Production	6.54	2.11	1.29	1.02	2.85	3.29
	Yield	2006	1211	1066	964	1351	1285
Caster seed	Area	117.22	166.75	263.93	222.99	195.27	226.34
	Production	101.33	241.24	382.53	341.09	286.14	335.11
	Yield	864	1447	1449	1530	1465	1481

Source: Production according to Final estimates and *advance estimates. (Directorate of Economics and Statistics, GOI, New Delhi)

Groundnut

Groundnut is called as the 'king' of oilseeds. It is one of the most important food and cash crops of our country. While being a valuable source of all the nutrients, it is a low-priced commodity but a valuable source of all the nutrients. It's called also as wonder nut and poor men's cashew nut.

Developing countries constitute 97% of the global area and 94% of the global production of this crop. Over 100 countries worldwide grow groundnut. The production of groundnut is concentrated in Asia and Africa is 56% and 40% of the global area and 68% and 25% of the global production, respectively (Madhusudhana B. 2013).

Area, Production and Yield of Major Crop Growing Countries
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Groundnut	China	437.12	1480.17	3386
	India	581.08	740.15	1274
	Nigeria	246.15	309.03	1255
	USA	49.66	184.93	3724
Total Rape/Mustard		2348.97	3831.96	1631

The major groundnut producing countries in the world are India, China, Niger, USA, Burma and Sudan. These countries account for about 70% of the area and 74% of the production.

Area, Production and Yield of Major Crop Growing States
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Gujrat	181.57	276.1	1520
	Andhra Pradesh	155.82	149.32	958
	Karnataka	82.02	59.46	725
	Tamilnadu	44.19	97.37	2204
	Rajasthan	33.78	57.1	1691
Total Rape/Mustard		581.08	740.15	1274

India occupies the first place, both in regard to the area and the production in the world. About 7.5 million ha are put under it annually and the production is about six million tons. Seventy percent of the area and seventy five percent of production has been concentrated in the five states of Gujarat, Andhra Pradesh, Tamilnadu, and Rajasthan. In these states Groundnut production is mainly depends on rainfall. The irrigated areas from about six percent of the groundnut are in India.

Area, Production and Yield of Major Crop Growing Districts
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Bikaner	1.023	2.147	2099
	Jodhpur	0.463	1.02	1666
	Jaipur	0.612	0.857	1849
Total Rape/Mustard		3.944	6.789	1721

Rajasthan is the fifth largest state of Groundnut production in India. Major Groundnut producing district in the state are Bikaner, Jodhpur, Bikaner and Churu. Fifty five percent of the area and sixty percent production have been concentrated in these districts.

Rapeseed/Mustard

Brassica (Rapeseed- Mustard) is the most important edible oilseed crop in India after groundnut and accounts for nearly 30% of the total oilseed production in the country (Damodar et al., 2005). It is one of the most important edible and cash crops of our country.

Area, Production and Yield of Major Crop Growing Countries(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	China	686.95	1258.54	1832
	Canada	682.72	1236.22	1811
	India	610.12	688.51	1128
Total Rape/Mustard		3222.95	5931.62	1840

According the current position of Rapeseed production in world China, Canada, India and USA are major producer country. India is producing 16% of the production of Mustard of world but in the country productivity is however quite low. The comparatively lower yields are mainly due to the fact that the quality of the seed varieties is generally poor and Mustard crop in India are mostly cultivated in irrigated areas.

Area, Production and Yield of Major Crop Growing States
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Rajasthan	246.79	311.28	1261
	Utter Pradesh	72.03	82.28	1142
	Haryana	51.32	80.62	1571
Total Rape/Mustard		610.12	688.51	1128

Rajasthan is India's top Rapeseed and Mustard producing state. Almost half (46%) of Rapeseed and Mustard is Produced by only the state. Rajasthan, Uttar Pradesh, Haryana and Madhya Pradesh are the major rapeseed-mustard growing states contributing about 77% and 82% of the total oilseed area and production of the country.

Area, Production and Yield of Major Crop Growing Districts
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Alwar	25.05	37.84	1510
	Ganganagar	24.78	37.67	1521
	Bharatpur	21.06	34.93	1658
Total Rape/Mustard		253.02	342.54	1354

Rajasthan is the major Rape/Mustard producer state in the country. Alwar, Ganganagar, Bharatpur, Hanumangadh. S. Madhopur and Dholpur district are mainly producing district in Rajasthan. Fifty percent of area and forty five percent of production of Mustard has been concentrated in these top four districts.

Linseed Area, Production and Yield of Major Crop Growing Countries
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Canada	47.98	64.32	1341
	China	34.09	35.52	954
	USA	12.09	15.69	1216
	India	37.99	15.71	413
Total Rape/Mustard		212.75	186.67	877

Canada is top producer of oilseed in the world. According area and production of linseed India has forth rank next to however. India is the fourth largest growing country of linseed in world level but yield is less compared to other countries.

Area, Production and Yield of Major Crop Growing States
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Madhya Pradesh	11.86	4.63	390
	Uttar Pradesh	6.33	2.41	382
	Chhattisgarh	4.51	1.36	301
Total Rape/Mustard		37.99	15.71	413

Madhya Pradesh (MP) is share of 30% Linseed production of the country with top rank. About 80% of area and production of Linseed is concentrated in four states, namely, MP, Uttar Pradesh, Maharashtra and Rajasthan.

Area, Production and Yield of Major Crop Growing Districts
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Nagaur	0.0064	0.0131	2036
	Kota	0.0025	0.0051	2037
	Pratapgarh	0.0013	0.0013	920
Total Rape/Mustard		0.019	0.028	1489

Castor Seed

The castor oil plant can vary greatly in its growth habits and appearance depending upon the climatic conditions. Castor seed is the source of castor oil, which has a wide variety of uses

Area, Production and Yield of Major Crop Growing Countries
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	India	94.78	137.58	1451
	China	21.32	17.84	848
	Brazil	16.81	10.53	627
Total Rape/Mustard		157.38	179.37	1140

Global castor seed production is around one million tons per year. Leading producing areas are India (with over 60 % of the global productivity).

Area, Production and Yield of Major Crop Growing States
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Gujrat	51.64	103.61	2006
	Rajasthan	16.07	20.87	1299
	Andhra Pradesh	18.96	8.94	472
Total Rape/Mustard		94.78	137.58	1451

Table shows that Gujarat is major castor seed producer state in India. Gujarat, Rajasthan and Andhra Pradesh contributing about 91 % and 97% to the countries area and production, respectively

Area, Production and Yield of Major Crop Growing Districts
(Average of 2015-16 to 2019-20)
(Area in 000'ha,Production in lac tons, yield in kg/ha)

Crop	Major Countries	Areas	Production	Yield
Rape/Mustard	Jalore	8.12	16.28	2003
	Sirohi	3.91	6.27	1604
	Barmer	3.35	2.88	860
Total Rape/Mustard		20.14	28.01	1390

Jalore, Sirohi and Barmer are major Caster seed producer district in Rajasthan.

Production of Linseed in Rajasthan is very low compared to other growing state of the country. Nagaur is top producer district of the state. About 55% percent production of total Linseed is concentrated in three districts, namely, Nagaur, Kota, and Pratapgarh.

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