

**Agricultural By-Product Export Performance of Sunflower Seed Cake**

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**Introduction:**

International trade plays an important role for economic development of developing countries. Agricultural export of various commodities is also important for economic development. In new era there is large scope and prospects for export of Indian agricultural commodities. There is large demand of agricultural commodities and various by-product in the world.

The present study is based on analysis of sunflower seed cake export in terms of growth rate, share in total export, economic benefit of export, export consistency. Researcher has examined the changes in trends and composition. Several studies have focused on sunflower seed cake used as a supplemental feed for animal. Sunflower seed cake is by-product of hot-pressing sunflower seeds after oil extraction and is commonly used as a protein supplement for animal. Sunflower seed cake is a very valuable protein feed for dairy animal. Sunflower seed is one of the important oil seed commodities in the world.

**Objectives of the study:**

- i) To examine comparative analysis of India and major sunflower seed cake export countries.
- ii) To examine export opportunities of sunflower seed cake of India.
- iii) To study sunflower seed cake production of major producing countries.

**Data Base and Methodology:**

The study is based on secondary data sources. The secondary data sources are collected from various published data, various journals, United States Department of Agriculture FAO reports etc.

The data collected from the secondary sources by researcher to examine and analyze the

performance of agricultural export. Statistical tools like; share in percentage, compound growth rate (CGR) for volatility and consistency, co-efficient of variance (CV) to capture the various sources of agricultural export etc are used.

**India and major countries production of sunflower seed cake:**

Russian Federation, European Union, Ukraine, Argentina, Turkey, China and India are the major sunflower seed cake producing countries in the world. The data of production in all these countries from 2013 to 2023 shows that the production of sunflower seed cake in Russian Federation has been increasing every year and it is highest than all other countries. The production in other countries like European Union, Ukraine, Argentina, Turkey is fluctuating every year. China and India shows decreasing trend in the production of sunflower seed cake. India production was low compared to all other countries.

The coefficient of variance of Sunflower seed cake production is less in European Union with 13.26 percent and high in India with 50.54 percent. It means that production of Sunflower seed cake is less volatile and more volatile in India. When we consider the compound growth rate; it is higher in Russian Federation and lower in Ukraine. India and China's compound growth rate (CGR) is negative. The compound growth rate of Russian Federation is higher compared to other countries and it is low in Ukraine.

**1 India and major countries production of sunflower seed cake**

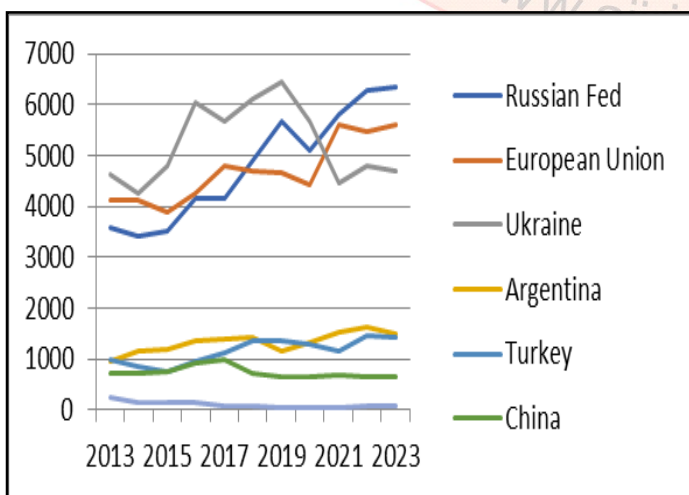
Year	Russian Federation	European Union	Ukraine	Argentina	Turkey	China	India
2013	21.20	24.39	27.59	5.72	5.88	4.21	1.41
2014	21.06	25.54	26.30	7.09	5.35	4.38	0.96
2020	21.26	23.42	28.	7.11	4.4	4.6	0.

15			98		8	0	81
20	21.27	21.87	30.	6.93	4.9	4.7	0.
16			93		4	6	69
20	20.82	23.99	28.	6.99	5.5	4.9	0.
17			37		7	0	48
20	23.43	22.41	29.	6.85	6.4	3.3	0.
18			16		3	8	36
20	26.08	21.44	29.	5.38	6.2	3.0	0.
19			68		6	1	27
20	25.17	21.89	28.	6.59	6.4	3.2	0.
20			05		5	3	31
20	27.28	26.46	20.	7.13	5.4	3.2	0.
21			99		4	1	25
20	27.86	24.27	21.	7.30	6.5	2.9	0.
22			30		3	7	40
20	28.27	25.10	21.	6.65	6.3	2.9	0.
23			02		2	2	41
C	23.01	13.26	14.	14.8	20.	15.	50
V			60	4	96	30	.5
							4
C	7.07	3.55	0.2	3.86	5.6	-	-
G			9		4	1.8	10
R						8	.1
							8

Source: Calculated from data of United States Department of Agriculture.

Graph: 1 explains major Sunflower seed cake producing countries in the world (Million Tonnes). The graph also clearly shows that Ukraine's production of sunflower seed cake was highest in the world. India's production was low compared to other countries.

Graph: 1 Major Sunflower Seed Cake Producing Countries in the World (Million Tonnes)



Source: calculated from data of United States Department of Agriculture

**Export of Major countries Sunflower seed cake:**

This section examines export trend of sunflower seed cake in terms of quantity in India and major producing countries during 2013 to 2023. Sunflower seed cake is one of the important animal food in the world.

Table: 2 shows India's and major countries export of sunflower seed cake during the period 2013 to 2023. Russian Federation, Ukraine, Bulgaria, Bulgaria, Netherland and India these are the major cotton production countries in the world. Ukraine was major exporter of sunflower seed cake. From 2013 to 2021 export of sunflower seed cake was increased but during 2022 it was decreased upto 35.23 percent. India's sunflower seed cake export was very low compared to other countries and and it shows decreasing tendency year by year. Russian Federation was second largest exporter of Sunflower seed cake with 21.30 percent during 2013 but decreased to 17.07 percent during 2022. Russian Federation shows decreasing tendency in the export of sunflower seed cake. Netherlands was third largest exporter of Sunflower seed cake with 4.49 percent during 2013 and decreased to 3.69 percent but only the year its export has increased up to 5.62 percent. Hungary's export of Sunflower seed cake was at fourth position with 4.44 percent but its export has increased to 5.64 percent in the year 2022.

Table: 2 Percentage share of Sunflower Seed Cake Export in the World (Export Quantity in Tonnes)

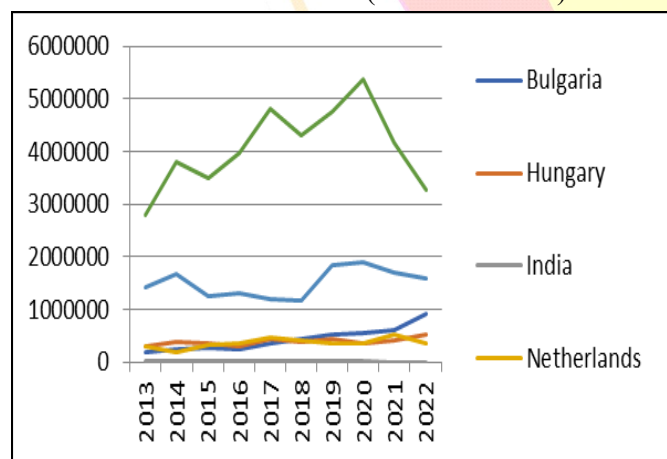
Year	Bulgaria	Hungary	India	Netherlands	Russian Federation	Ukraine
2013	2.63	4.44	0.13	4.49	21.30	42.03
2014	3.08	4.64	0.07	2.45	20.99	47.29
2015	3.47	4.71	0.04	4.37	16.86	47.06
2016	3.07	3.66	0.05	4.58	16.57	50.30
2017	3.86	4.56	0.02	4.85	12.76	51.78
2018	5.01	4.29	0.02	4.43	13.04	48.34

2019	4.98	4.36	0.01	3.52	17.71	46.25
2020	5.27	3.34	0.01	3.33	17.95	50.79
2021	6.57	4.56	0.01	5.62	18.83	45.75
2022	9.74	5.64	0.00	3.69	17.07	35.23
CGR	17.99	4.46	-32.49	5.10	2.57	2.85
CV	51.81	18.52	99.44	23.47	18.10	19.02

Source: Calculated from www.fao.org.

The compound growth rate of major Sunflower seed cake exporting Countries in the world shows that Bulgaria was at highest position with 17.99 percent, Russian Federation was at lowest with 2.57 percent and India's CGR was negative with -32.49 percent. The CV of India's Sunflower seed cake export was more volatile and Russian Federation's was less volatile. Graph: 2 shows major Sunflower seed cake exporting countries in the world (Million Tonnes).

Graph: 2 Major Sunflower Seed Cake Exporting Countries in the World (Million Tonnes)



Source: Calculated from www.fao.org.

**Conclusion:**

Russian Federation, European Union, Ukraine, Argentina, Turkey, China and India are the major sunflower seed cake producing countries in the world. It is observed that India's production and export of sunflower seed cake was very low during 2013 to 2022. Most of the people in India are dependent on agriculture along with animal husbandry as their main source of employment.

Sunflower seed cake is used for many purposes including animal feed, organic fertilizer etc. due to the high protein in it. So India has greater opportunity in the production of sunflower seed cake.

**References:**

- 1) Bagul, M. B. & Newase, S. B. (2023), "India's Agricultural Trade in Pre and Post-liberalization Period: A Study of Groundnut Cake", published in 'Education and Society', Special issue-1/Volume-I, UGC care Listed Journal ISSN 2278-6864, July 2023.
- 2) Sathe Dhanmanjiri and Deshpande R. S. (2006): 'Sustaining Agricultural Trade Policy and Impact', Economic and Political Weekly, pp-5337-5344, December 30.
- 3) Bagul, M. B. (2016), "Soya Cake Economy of India" Published in "Indian Economy views and Vision-Essays" in honors of Professor V. B. Jugale, Edition 2016, ISBN: 978-81-8387-740-4, pp. 298-330 Published by Serials publication (p) LTD. New Delhi.
- 4) Bagul, M. B. (2015), "India's Grape Economy" Published in 'Interlink Research Analysis' half yearly international journal, Vol. I, Issue: XII, ISSN 0976-0377, July. 2015 To Dec.2015 (Impact Factor 2.06).
- 5) Newase, S. B. (2016), "Competitiveness of Maize Production in India" Published in "Indian Economy views and Vision-Essays" in honors of Professor V. B. Jugale, Edition 2016, ISBN: 978-81-8387-740-4, pp. 422-444 Published by Serials publication (p) LTD. New Delhi
- 6) [www.wikipedia.org](http://www.wikipedia.org).
- 7) [www.fao.org](http://www.fao.org).
- 8) [www.apeda.org](http://www.apeda.org).