

## Unveiling Challenges And Opportunities In Organic Exports: A Case Study Of India

Aman Verma<sup>1</sup>, Dr. R. K. Doharey<sup>2</sup>, Amrit Warshini<sup>1</sup>, Kapil Verma<sup>3</sup>

1. Research Scholar, 2. Professor & HOD, 3. P. G. Scholar

Department of Extension Education

Acharya Narendra Deva University Of Agriculture And Technology Kumarganj, Ayodhya

### ABSTRACT

The global market for organic produce is burgeoning, presenting immense potential for India's vast agricultural sector. However, despite favorable growing conditions and a rising domestic demand, Indian organic exports remain hampered by significant challenges. This paper delves into this complex landscape, employing a case study approach to dissect the roadblocks in India's organic export journey. We analyze key constraints including fragmented production systems, inadequate certification infrastructure, logistical bottlenecks, and limited market access. Conversely, we also explore promising opportunities driven by rising consumer awareness, evolving trade policies, and strategic collaborations. The paper proposes actionable strategies to overcome challenges and capitalize on emerging opportunities, paving the way for India to become a dominant player in the international organic market.

*Keywords: Organic exports, India, challenges, opportunities, sustainable agriculture.*

### INTRODUCTION

Amidst rising concerns about food safety, environmental sustainability, and climate change, the global organic market has witnessed unparalleled growth in recent years. In 2021, this burgeoning sector reached a staggering €124.8 billion, with a robust projected expansion of 10.1% annually until 2025 (FiBL & IFOAM, 2023). While this expansion holds immense promise for both environmental and economic development, unlocking the full potential of organic agriculture necessitates traversing borders and transcending the realm of mere chemical-free cultivation. This review paper delves into the intricate yet often overlooked landscape of organic exports: a domain brimming with both significant challenges and captivating opportunities.

Beyond the fertile fields and meticulous organic practices, exporting organic products presents a complex web of hurdles. Policy and regulatory frameworks across nations can be inconsistent, creating intricate labyrinths of certification requirements and trade barriers (McMillan, 2020). Logistical bottlenecks and

inadequate infrastructure in developing countries pose formidable challenges, particularly with regards to maintaining product integrity through efficient cold chain management (ITC, 2020). Additionally, gaining a foothold in competitive international markets characterized by established distribution channels and consumer preferences for price over organic certification can be daunting for fledgling organic exporters (Oly *et al.*, 2019).

However, amidst these difficulties lie seeds of remarkable potential. Collaborative efforts towards policy harmonization and streamlining international trade agreements can pave the way for smoother flow of organic products across borders (FAO & UNCTAD, 2019). Technological advancements in cold chain infrastructure, e-commerce platforms, and data-driven solutions offer innovative avenues for overcoming logistical constraints (OECD, 2022). Building consumer trust and awareness through transparent certification processes, targeted marketing campaigns, and educational initiatives can unlock significant market potential (Ritter *et al.*, 2021). Furthermore, strengthening producer organizations and cooperatives can provide organic farmers with

collective bargaining power, market access, and knowledge sharing opportunities, propelling them onto the global stage (ITC, 2016).

#### MATERIAL AND METHODS

To compile a comprehensive review of organic export in India, this study adopted a rigorous literature search and selection process. Scopus, Web of Science, EBSCO, Pro Quest, Science Direct, Google Scholar, Semantic Scholar, and Research Gate served as the primary databases, yielding 15,600 initial results through targeted keyword searches like “challenges,” “opportunities,” “organic exports,” “organic farming,” and “India.” Applying stringent inclusion/exclusion criteria based on relevance, theoretical context, and specific focus on Indian perspectives, the researcher narrowed the pool to 60 articles for detailed examination. Further scrutiny against established criteria focused on theoretical interpretation, exploration of benefits, and Indian context led to the exclusion of 25 articles. Finally, full-text analysis and final application of the criteria culminated in a selection of 35 key articles for in-depth review within this paper.

#### GLOBAL LANDSCAPE OF ORGANIC AGRICULTURE

##### Organic agricultural land in 2021

In 2021, 76.4 million hectares were under organic agricultural management worldwide. This constituted 1.6 percent of the total farmland. Organic farmland increased by 1.7 percent in 2021. The region with the most organic agricultural land was Oceania, with 36.0 million hectares, followed by Europe with 17.1 million hectares, Latin America (9.9 million hectares), Asia (6.1 million hectares),

Northern America (3.7 million hectares) and Africa (2.1 million hectares). Oceania has almost half (47 percent) of the global organic agricultural land. Europe, a region that has had a very constant growth of organic land over the years, had over 23 percent of the world's organic agricultural land, followed by Latin America with almost 13 percent. Australia is the country with the most organic agricultural land; it is estimated that 97 percent of the farmland is extensive grazing areas. Argentina is second, followed by France in third place, the first time a European country holds this position. The ten countries with the largest organic agricultural areas have a combined total of 59.6 million hectares and constitute almost 80 percent of the world's organic agricultural land. Apart from the organic agricultural land, there are further organic areas such as wild collection areas. These areas constituted approximately 30 million hectares. (Source: FiBL survey 2023)



Organic Agriculture: Global Landscape in 2023

Indicator	World	Top Countries	Countries with Organic Activities
Organic Agricultural Land (2023)	76.4 million hectares	Australia (35.7 million ha)	191 countries
Organic Share of Total Agricultural Land (2023)	1.6%	Liechtenstein (40.2%)	-
Increase in Organic Land (2022/2023)	1.3 million ha (+1.7%)	China (+13%), France (+9%), Spain (+8%)	-
Wild Collection & Non-Agricultural Areas (2023)	29.7 million ha	Finland (6.9 million ha)	-
Organic Producers (2023)	3.7 million	India (1.6 million)	-
Organic Market (2023)	-	US (€48.6 billion)	-
Per Capita Consumption (2023)	€15.7	Switzerland (€425)	-
Countries with Organic Regulations (2023)	74	-	-
IFOAM Affiliates (2023)	791	Germany (81), China (54), India (46), USA (45)	-

FiBL & IFOAM – Organics International (2023)

In 2021, over 76.4 million hectares of organic agricultural land, including in-conversion areas, were recorded. The regions with the largest organic agricultural land areas are Oceania (36.0 million hectares – almost half the world's organic agricultural land pr 47 percent) and Europe (17.8 million hectares, 23 percent). Latin America had 9.9 million hectares (13 percent), followed by Asia (6.5 million hectares, 8.5 percent), Northern America (3.5 million hectares, 4.6 percent) and Africa (2.7 million hectares, 3.5 percent).

Australia has the largest area Countries with the most organic agricultural land were Australia (35.7 million hectares), Argentina (4.1 million hectares) and France (2.8 million hectares). Globally, 1.6 percent of the farmland is organic In 2021, 1.6 percent of the world's agricultural land was organic. The highest organic shares of the total agricultural land, by region, were in Oceania (9.7 percent) and in Europe (3.6 percent; European Union: 9.6 percent). Liechtenstein had the highest organic share, with 40.2 percent Some countries reach far higher shares than the global share: Liechtenstein (40.2 percent), Samoa (29.1 percent) and Austria (26.5 percent) had the highest organic shares. In 20 countries, 10 percent or more of the

agricultural land was organic – a new record. Growth in organic farmland – Increase of 1.3 million hectares Organic farmland increased by 1.3 million hectares (1.7 percent) in 2021. Many countries reported a significant increase. In absolute terms, the biggest increases were in China, France and Spain: in China, organic farmland increased by almost 320'000 hectares (+13.1 percent), in France by nearly 228'000 hectares (+8.9 percent) and in Spain by almost 198'000 hectares (+8.1 percent). However, some countries also reported decreases. The most notable decrease occurred in Argentina, which reported almost 0.38 million hectares less (mainly grazing areas). Increase of organic farmland in Africa, Asia, Europe and Oceania In 2021, organic agricultural land increased in Africa, Asia, Europe and Oceania (Table 5). The highest absolute growth was in Europe (+4.4 percent, +0.75 million hectares), followed by Africa (+17.3 percent, +0.39 million hectares) and Asia (+5.8 percent, +0.36 million hectares), while Latin America and North America reported a decrease of organic farmland. Growth in most major crop groups Land use and crop details were available for over 92 percent of the organic agricultural land. Some countries with very large organic areas, such as Brazil and India, had little or no information on their land use (see page 72). Nearly two-thirds of the organic agricultural land

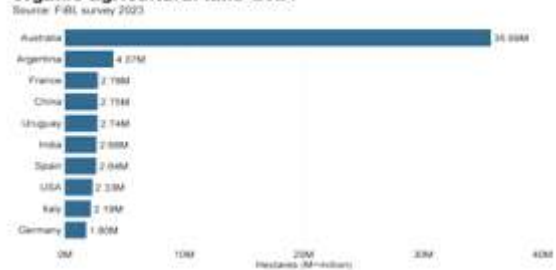
was grassland/grazing areas (almost 50 million hectares), which decreased by 2.5 percent in 2021. With almost 14.8 million hectares, arable land constituted 19 percent of the organic agricultural land. An increase of 11.4 percent since 2020 was reported. Most of this category of land was used for cereals, including rice, followed by green fodder from arable land, oilseeds, textile crops and dry pulses.

Top Ten Countries With Largest Area Of Organic Agriculture Land :

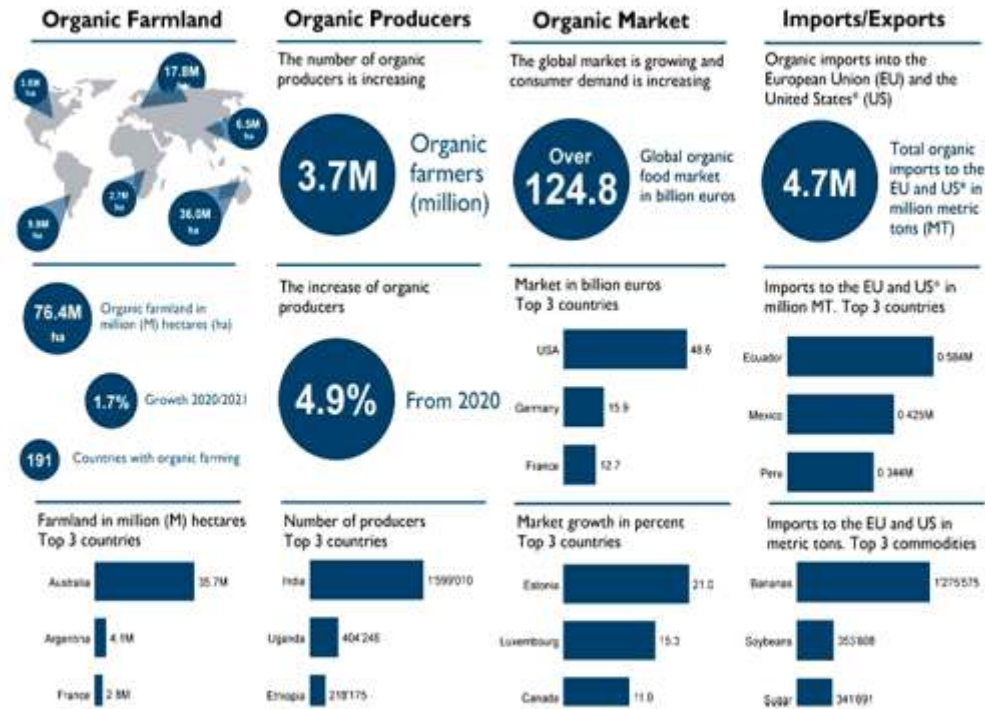
Organic farming, practiced in 187 countries by 3.1 million farmers on 72.3 million hectares (FAO, 2021), has blossomed into a global phenomenon. Led by Australia (35.7 million ha), Argentina (3.6 million ha), and Spain (2.35 million ha), this sector generated over €106 billion in 2019 (FAO, 2021). Major exporters like the U.S. (186,339 MT), EU

(170,762 MT), and Canada (40,677 MT) fuel this international trade (Funk & Kennedy, 2016). Consumer perception plays a crucial role, with 55% of Americans perceiving organic produce as healthier, and 75% believing in its environmental benefits (Funk & Kennedy, 2016; Seufert et al., 2017). This positive image, particularly strong in Europe (Mercati, 2016), is spreading to wealthier urban consumers in developing nations (Probst et al., 2012), suggesting significant potential for future growth.

World: The ten countries with the largest areas of organic agricultural land 2021



Organic Agriculture Worldwide 2021



Infographic 1: Organic agriculture worldwide - key indicators 2021

Source: FiBL survey 2023

**CULTIVATING THE FUTURE: AN INDIA VIEW OF ORGANIC GROWTH**

Despite accounting for only 2.2% of global agricultural land, India stands tall as the world's fifth largest producer of organic products, boasting a burgeoning 2.65 million hectares under organic cultivation as of 2023 (APEDA, 2023; FiBL & IFOAM, 2023). This remarkable 60% surge since 2020 translates to an annual growth rate of over 20%, showcasing India's meteoric rise in the global organic landscape. This expansion is fueled by a potent confluence of factors: soaring domestic demand driven by health and environmental concerns, projected to reach a staggering ₹20,000 crore by 2025 (APEDA, 2023); supportive government initiatives like NMSA and PKVM fostering infrastructure, training, and financial aid for organic farmers (APEDA, 2023); diversification beyond traditional staples towards fruits, vegetables, and spices catering to a wider market (APEDA, 2023); and robust export potential, with organic exports exceeding ₹12,000 crore in 2022-23 (APEDA, 2023).

**Organic Certification Data under NPOP 2022-23**

Column A Column B  
 AREA  
 Cultivated Area (Organic) 1764677.15 Ha  
 Cultivated Area (In conversion) 3627115.82 Ha  
 Wild Harvest Collection Area 4780130.56 Ha  
 PRODUCTION  
 Farm Production (Organic) 2664679.54 MT  
 Farm Production (In conversion) 288146.75 MT  
 Wild Harvest Production 19468.21 MT  
 ORGANIC EXPORT  
 Total Export Quantity 312800.51 MT  
 Total Export value (INR) Rs.5525.18 Crore  
 Total Export Value (US\$) 708.33 Million USD

Harvest Production 19468.21 MT  
 ORGANIC EXPORT  
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 Total Export Value (US\$) 708.33 Million USD  
 India's organic sector continues to flourish, with 1,764,677 hectares of land under certified organic cultivation, 3,627,115 hectares in conversion, and 47,801,306 hectares dedicated to wild harvest collection. This robust base has yielded a substantial 2,664,679 metric tons of organic farm produce, accompanied by 288,146 metric tons from land in conversion and 19,468 metric tons from wild harvests. The nation's organic exports have also soared, reaching 312,800 metric tons valued at Rs. 5,525.18 crore (US\$ 708.33 million), signaling a vibrant and expanding market for Indian organic products on the global stage. (apeda.gov.in)

Column A	Column B
AREA	
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Total Export Quantity	312800.51 MT
Total Export value (INR)	Rs.5525.18 Crore
Total Export Value (US\$)	708.33 Million USD

<b>STATE - WISE AREA UNDER ORGANIC CERTIFICATION NPOP 2022 -23</b>				
S.NO.	State Name	Cultivated Area		Total Area (In Ha)
		Organic Area (In Ha)	Conversion Area(In Ha)	
1	-----	686208.31	831168.8	15,17,377.11
2	Maharashtra	258638.55	1025675.6	12,84,314.15
3	Gujarat	84404.36	851526.64	9,35,931.00
4	Rajasthan	216440.36	364239.43	5,80,679.79
5	Odisha	77950.82	117128.66	1,95,079.48
6	Uttarakhand	32634.01	65,759.72	98,393.73
7	Telangana	7288.85	77,185.37	84,474.22
8	Karnataka	44342.45	37,673.11	82,015.56
9	Sikkim	75453.18	22.096	75,475.28
10	Uttar Pradesh	52422.44	15,584.61	68,007.05
11	Andhra Pradesh	26949.05	35,966.97	62,916.02
12	Tamil Nadu	18652.5	39,914.20	58,566.70
13	Jharkhand	1499.76	52,620.11	54,119.87
14	Kerala	32602.71	11,511.74	44,114.45
15	Bihar	17594.82	15,152.76	32,747.58
16	Jammu & Kashmir	25093.94	7,510.56	32,604.50
17	Meghalaya	21652.71	2,356.33	24,009.04
18	Assam	15593.93	7,473.49	23,067.42
19	Mizoram	4796.84	15,264.10	20,060.94
20	Tripura	2490.13	17,124.31	19,614.44
21	Chhattisgarh	13258.18	3,641.68	16,899.86
22	Arunachal Pradesh	3109	9,773.68	12,882.68
23	Nagaland	7550.61	5,002.56	12,553.17
24	Goa	11203.22	1,193.19	12,396.41
25	Himachal Pradesh	8507.25	2,557.85	11,065.10
26	Manipur	7682	3,003.50	10,685.50
27	Punjab	890.12	9,002.53	9,892.65
28	West Bengal	7479.66	1,314.58	8,794.24
29	Haryana	2265.54	629.22	2,894.76
30	LADAKH	0	121.42	121.42
31	Pondicherry	21.17	0.34	21.51
32	New Delhi	0.72	16.67	17.39
33	Andaman & Nicobar Islands	0	0	0.00
<b>Total:</b>		1764677.15	3627115.82	53,91,792.97

(apeda.gov.in)

<b>TOTAL AREA UNDER ORGANIC CERTIFICATION PROCESS DURING LAST 5 YEARS (CULTIVATED + WILD HARVEST) (IN HA)</b>						
<b>S. No.</b>	<b>State Name</b>	<b>2017 -18</b>	<b>2018 -19</b>	<b>2019 -20</b>	<b>2020 -21</b>	<b>2021 -22</b>
1	Andaman & Nicobar Islands	0.00	7484.00	7484.00	0.00	155.00
2	Andhra Pradesh	184748.65	37409.72	42101.87	36801.36	49638.42
3	Arunachal Pradesh	6179.69	9246.94	10657.66	13114.12	12636.64
4	Assam	28071.81	28234.67	26753.67	18470.84	18102.94
5	Bihar	695.80	3519.51	22712.55	29902.54	30941.01
6	Chhattisgarh	191464.66	206180.71	208392.80	286684.52	3008606.33
7	Goa	15698.98	20964.80	20786.66	18222.16	18259.72
8	Gujarat	85400.71	94708.69	95207.58	147866.41	602248.50
9	Haryana	6912.40	5998.58	6155.75	4903.06	3198.95
10	Himachal Pradesh	170153.47	203847.50	204836.35	203736.47	203043.02
11	Jammu & Kashmir	180870.34	187002.89	215275.95	192769.82	59825.58
12	Jharkhand	51187.93	58116.87	64254.18	81661.70	58970.14
13	Karnataka	105515.02	104962.37	170418.49	174423.56	110703.45
14	Kerala	34160.14	40911.24	47575.29	48364.18	43681.54
15	Ladakh	0.00	0.00	64.22	817.85	7817.85
16	Lakshadweep	895.51	895.51	895.51	895.51	895.51
17	Madhya Pradesh	1156881.40	918303.08	1161015.03	1637730.46	2370593.41
18	Maharashtra	304074.81	261571.74	293135.19	371798.28	1133668.57
19	Manipur	5397.90	7460.82	14990.07	14724.92	14628.42
20	Meghalaya	40335.66	48409.74	45382.40	38376.39	27508.74
21	Mizoram	998.95	7039.89	10029.89	13038.89	19038.89
22	Nagaland	8839.86	8268.56	14254.97	14790.38	14269.27
23	New Delhi	9.23	0.72	0.72	5.17	12.95
24	Odisha	117910.30	127851.77	115676.68	96306.88	184034.35
25	Pondicherry	2.84	2.84	23.65	23.65	21.51
26	Punjab	18000.77	25524.58	25637.95	18637.50	24180.60
27	Rajasthan	442133.72	632701.23	539245.81	481862.38	686420.61
28	Sikkim	76076.18	75798.92	75717.65	75729.66	75475.28
29	Tamil Nadu	20070.51	26546.83	36766.59	41618.86	53388.22
30	Telangana	8919.82	8759.52	8742.28	6865.56	39200.47
31	Tripura	2251.19	2534.52	3539.18	6521.31	12081.63
32	Uttar Pradesh	192734.40	205980.82	132031.67	159307.73	115590.47
33	Uttarakhand	104134.66	41409.55	43647.02	82210.20	113747.54
34	West Bengal	5811.48	20989.65	6392.05	21002.61	7280.37
<b>Total</b>		<b>3566538.7</b>	<b>3428638.7</b>	<b>3669801.3</b>	<b>4339184.9</b>	<b>9119865.9</b>

<b>COUNTRY WISE EXPORT DURING 2022 -23</b>				
<b>Sl. No.</b>	<b>Country Name</b>	<b>Exported Qty (In MT)</b>	<b>Total Value (In Crore Rs)</b>	<b>Value (In USD Million)</b>
1	European Union	117369.847	2726.304	349.5261
2	U.S.A.	126804.570	2040.561	261.6104
3	CANADA	38726.391	332.234	42.5941
4	GREAT BRITAIN	11670.826	146.393	18.7684
5	SWITZERLAND	4630.467	92.621	11.8744
6	AUSTRALIA	1045.793	45.052	5.7760
7	VIETNAM	3649.192	20.723	2.6569
8	ECUADOR	1812.240	18.896	2.4225
9	ISRAEL	1720.733	15.929	2.0421
10	JAPAN	223.434	15.866	2.0341
11	NEWZEALAND	875.813	13.474	1.7275
12	KOREA REPUBLIC	1505.560	13.237	1.6971
13	U.A.E.	390.855	7.181	0.9206
14	SRI LANKA	636.221	7.044	0.9031
15	MOROCCO	79.315	4.672	0.5989
16	SINGAPORE	179.689	4.317	0.5534
17	CHINA	547.200	3.438	0.4408
18	SAUDI ARABIA	184.198	3.233	0.4144
19	THAILAND	177.291	2.790	0.3577
20	MALAYSIA	121.113	1.702	0.2182
21	KUWAIT	72.984	1.288	0.1651
22	QATAR	19.585	1.076	0.1379
23	MAURITIUS	41.811	0.935	0.1198
24	OMAN	89.235	0.712	0.0913
25	TURKEY	18.000	0.707	0.0906
26	BAHRAIN	35.201	0.590	0.0757
27	BRAZIL	32.870	0.574	0.0736
28	KENYA	0.990	0.569	0.0729
29	FRENCH POLYNESIA	34.400	0.446	0.0572
30	SOUTH AFRICA	6.478	0.427	0.0547
31	BOLIVIA	22.000	0.329	0.0422
32	CHILE	4.833	0.311	0.0399
33	TRINIDAD AND TOBAGO	48.581	0.270	0.0346
35	HONG KONG	6.706	0.253	0.0324
36	YOGOSLAVIA	1.346	0.235	0.0302
37	BANGALADESH	6.000	0.190	0.0244
38	TAIWAN	0.222	0.148	0.0190
39	MOLDOVA	0.282	0.092	0.0118
40	BOSNIA s	3.000	0.092	0.0118
41	COLOMBIA	0.284	0.080	0.0103
42	NIGERIA	0.045	0.061	0.0079
43	SAINT LUCIA	0.047	0.029	0.0037
44	GEORGIA	2.508	0.026	0.0034
45	RUSSIA	1.760	0.026	0.0034
46	FRENCH GUIANA	0.085	0.024	0.0031
47	INDONESIA	0.500	0.016	0.0021
48	WEST INDIES	0.005	0.002	0.0003
<b>Total</b>		<b>312800.506</b>	<b>5525.178</b>	<b>708.3562</b>



COUNTRY WISE COMPARATIVE REPORT OF ORGANIC EXPORT								
		2020 -2021		2021 -2022		-2021 -22		
S. NO.	Country Name	Exported Qty (In MT)	Total Value (In USD Million)	Exported Qty (In MT)	Total Value (In USD Million)	Growth Quantity	Year on Year Growth Value	Year on Year Growth Value (In USD Million)
1	ALGERIA	0.05	0.00	0.00	0.00	-100.00	-100.00	-100.00
2	ARGENTINA	1.85	0.01	0.00	0.00	-100.00	-100.00	-100.00
3	AUSTRALIA	2923.47	10.89	1574.14	6.59	-46.16	-39.48	-39.48
4	BAHRAIN	150.22	0.27	74.80	0.13	-50.21	-49.73	-49.81
5	BANGLADESH	0.00	0.00	0.42	0.02	100.00	100.00	100.00
6	BARBODOS	0.00	0.00	0.00	0.00	-100.00	-100.00	100.00
7	BHUTAN	0.00	0.00	1.00	0.00	100.00	100.00	100.00
8	BOLIVIA	218.98	0.29	135.00	0.18	-38.35	-36.44	-36.68
9	BOSNIA AND HERZEGOVINA	5.00	0.02	0.00	0.00	-100.00	-100.00	-100.00
10	BRAZIL	0.25	0.00	34.14	0.10	13556.00	5304.19	4850.00
11	BRUNEI	0.00	0.00	0.40	0.00	100.00	100.00	100.00
12	CAMEROON	29.69	0.08	0.00	0.00	-100.00	-100.00	-100.00
13	CANADA	69142.41	56.97	40677.47	49.01	-41.17	-13.98	-13.99
14	CHILE	87.95	0.31	87.24	0.32	-0.81	4.31	4.22
15	CHINA	238.29	0.73	387.63	0.75	62.67	2.37	2.34
16	COLOMBIA	6.00	0.03	0.00	0.00	-100.00	-100.00	-100.00
17	ECUADOR	3708.05	2.92	4172.44	5.09	12.52	74.31	74.34
18	EGYPT	25.33	0.21	9.48	0.07	-62.57	-67.99	-68.12
19	European Union	267076.35	355.82	170762.22	302.39	-36.06	-15.02	-15.02
20	FRENCH POLYNESIA	70.40	0.12	52.80	0.10	-25.00	-21.91	-21.95
21	GEORGIA	9.53	0.01	17.08	0.02	79.22	30.71	30.77
22	GHANA	3.39	0.02	52.07	0.50	1434.27	2611.34	2661.11
23	GREAT BRITAIN	20844.14	19.54	30221.77	41.57	44.99	112.71	112.72
24	HONG KONG	72.40	0.25	25.77	0.13	-64.41	-49.60	-49.60
25	INDONESIA	0.50	0.00	0.00	0.00	-100.00	-100.00	-100.00
26	ISRAEL	4480.12	4.65	1751.20	2.63	-60.91	-43.50	-43.50
27	JAPAN	611.32	2.59	478.82	2.86	-21.67	10.37	10.39
28	JORDAN	68.00	0.04	0.00	0.00	-100.00	-100.00	-100.00
29	KENYA	0.13	0.02	0.24	0.03	90.40	14.05	16.67
30	KOREA REPUBLIC	4536.34	4.31	3402.44	4.12	-25.00	-4.54	-4.55
31	KUWAIT	203.33	0.38	106.66	0.21	-47.54	-44.83	-44.79
32	LEBANON	299.41	0.62	5.48	0.03	-98.17	-95.93	-95.94
33	MALAYSIA	369.22	0.61	235.96	0.50	-36.09	-16.79	-16.69
34	MALDIVES	0.03	0.00	0.00	0.00	-100.00	-100.00	-100.00
35	MAURITIUS	94.19	0.23	39.85	0.10	-57.69	-58.45	-58.44
36	MEXICO	39.00	0.26	37.25	0.30	-4.49	15.14	15.27
37	MOLDOVA	0.34	0.01	0.24	0.01	-28.91	-45.92	-46.15
38	MOROCCO	0.03	0.00	2.93	0.03	9650.00	5445.19	3200.00
39	NEPAL	0.35	0.01	1.70	0.03	390.78	398.06	400.00
40	NEWZEALAND	1855.59	2.72	970.25	2.11	-47.71	-22.41	-22.40
41	NIGERIA	0.09	0.02	0.07	0.01	-20.88	-32.79	-31.58
42	OMAN	209.31	0.40	84.26	0.12	-59.75	-70.29	-70.20
43	PERU	2.86	0.02	0.10	0.00	-96.50	-77.91	-77.78
44	PHILIPPINES	19.66	0.06	24.04	0.02	22.25	-60.92	-60.66
45	QATAR	241.22	0.48	111.56	0.20	-53.75	-59.46	-59.38
46	RUSSIA	60.61	0.08	71.31	0.11	17.65	35.16	35.44
47	SAINT LUCIA	0.14	0.01	0.01	0.00	-94.20	-83.71	-80.00
48	SAUDI ARABIA	325.67	0.86	197.47	0.28	-39.37	-67.10	-67.09
49	SINGAPORE	348.05	0.76	311.51	0.81	-10.50	6.58	6.62
50	Sint Maarten	7.62	0.04	2.20	0.02	-71.08	-62.97	-64.29
51	SOUTH AFRICA	32.55	0.20	8.18	0.06	-74.87	-68.95	-68.88
52	SRI LANKA	300.13	1.37	171.34	1.11	-42.91	-18.45	-18.46
53	SWITZERLAND	3924.64	7.67	5142.11	10.84	31.02	41.42	41.42
54	TAIWAN	0.00	0.00	0.82	0.02	100.00	100.00	100.00
55	THAILAND	200.98	0.55	185.13	0.37	-7.89	-32.94	-32.91
56	TRINIDAD AND TOBAGO	0.19	0.01	0.00	0.00	-100.00	-100.00	-100.00
57	TURKEY	45.46	0.15	7074.60	7.42	15462.24	4709.84	4720.78
58	U.A.E.	1074.82	3.40	478.27	1.15	-55.50	-66.24	-66.24
59	U.S.A.	500935.95	557.79	186339.21	326.15	-62.80	-41.53	-41.53
60	UKRAINE	0.30	0.01	0.22	0.02	-26.32	119.37	120.00
61	URUGUAY	0.00	0.00	1.11	0.02	100.00	100.00	100.00
62	VIETNAM	3276.59	2.17	4796.89	3.31	46.40	52.71	52.72
63	YOGOSLAVIA (SERBIA - MONTENEGRO)	1.20	0.01	1.12	0.01	-6.67	85.54	100.00
<b>Total</b>		<b>888179.69</b>	<b>1040.96</b>	<b>460320.40</b>	<b>771.96</b>	<b>-48.17</b>	<b>-25.84</b>	<b>-25.84</b>

## CONQUERING CHALLENGES TO THRIVE IN THE ORGANIC EXPORT:

1. Meeting stringent international standards: Diverse certification regulations across importing countries add complexity, increasing costs and administrative burdens for exporters (Bio Grace, 2023). Inconsistent interpretation of standards further complicates compliance (ITC, 2022).

2. Limited infrastructure and logistics: Lack of dedicated cold chain facilities, storage spaces, and efficient transportation networks hampers efficient export, leading to product spoilage and reduced shelf life (ITC, 2022). This is particularly critical for perishable organic products.

3. Price competitiveness: Premium prices associated with organic production can make exports less competitive in price-sensitive markets (Bio Grace, 2023). Economies of scale are often limited in organic farming, further impacting cost efficiency.

4. Market access barriers: Trade tariffs and non-tariff barriers like sanitary and phytosanitary measures can restrict access to key markets, disproportionately impacting developing countries with nascent organic sectors (UNCTAD, 2023).

5. Limited consumer awareness: Lack of consumer awareness about organic products in certain markets restricts demand and limits export potential (ITC, 2022). Building consumer trust and educating them about the benefits of organic is crucial.

6. Traceability and transparency: Concerns about authenticity and fraud can undermine consumer confidence in organic imports. Robust traceability systems and verification mechanisms are essential to ensure product integrity (Bio Grace, 2023).

7. Limited product diversification: Reliance on traditional staples like pulses and spices can limit market reach and reduce export value. Encouraging diversification towards high-value niche products can unlock new market opportunities (ITC, 2022).

8. Knowledge gaps and capacity building: Limited technical knowledge and skills among farmers and exporters regarding organic production, export processes, and marketing strategies hamper efficient participation in the global organic market (UNCTAD, 2023).

9. Limited Infrastructure and Cold Chain Management: Lack of specialized storage, processing, and transportation facilities for perishable organic products leads to post-harvest losses and quality degradation (Singh et al., 2023).

10. Certification Costs and Complexities: Stringent organic certification processes and associated fees raise entry barriers for small-scale farmers and exporters, particularly in developing nations (FAO, 2023).

11. Harmonization and Equivalence Issues: Discrepancies between national and international organic standards create market access hurdles and require complex equivalence agreements (Willer et al., 2020).

12. Limited Market Knowledge and Consumer Awareness: Inadequate market research and information dissemination create knowledge gaps for exporters and hinder consumer adoption of organic products, especially in emerging markets (Ramesh et al., 2020).

13. Price Volatility and Competition from Conventional Products: Fluctuations in organic product prices and intense competition from conventional counterparts with lower costs can affect export profitability (Sharma et al., 2021).

14. Logistical Challenges and Trade Barriers: High freight costs, complex customs procedures, and sanitary and phytosanitary regulations can impede efficient and seamless export of organic products (APEDA, 2023).

15. Phytosanitary and Pesticide Residues: Residues of prohibited pesticides in organic products, even from unintentional cross-contamination, can lead to rejections at entry points and reputational damage (Ramesh et al., 2020).

16. **Limited Marketing and Branding Strategies:** Ineffective marketing campaigns and weak brand differentiation for organic products compared to conventional options can limit consumer outreach and market share (Ramesh *et al.*, 2020).

17. **Climate Change and Environmental Challenges:** Climate change-induced disruptions in production and the vulnerability of organic systems to extreme weather events can affect export stability and sustainability (FAO, 2023).

18. **Limited Access to Research and Technology:** Inadequate access to advanced organic farming techniques, pest management strategies, and post-harvest technologies can constrain productivity and export competitiveness for developing countries (Willer *et al.*, 2020).

#### FLOURISHING OPPORTUNITIES IN ORGANIC EXPORTS: A GLOBAL LANDSCAPE

The global organic market, projected to reach a staggering €1 trillion by 2030 (FiBL & IFOAM, 2023), presents a plethora of opportunities for burgeoning organic exporters, particularly developing nations like India. Here, we explore some key avenues for maximizing this potential:

1. **Rising consumer demand:** Heightened awareness of health benefits and environmental concerns fuels a relentless surge in organic consumption, especially in developed economies (Funk & Kennedy, 2016). Diversifying into niche products like nutraceuticals and functional foods catering to specific health trends can tap into this burgeoning demand (APEDA, 2023).

2. **Untapped geographic markets:** Expanding beyond traditional destinations like Europe and North America unlocks immense potential in emerging markets like China, Southeast Asia, and Africa, witnessing robust economic growth and rising disposable incomes (UNCTAD, 2023). Tailoring product offerings and marketing strategies to specific regional preferences is crucial for success.

3. **Evolving trade dynamics:** Free trade agreements and preferential tariffs can reduce export barriers and enhance market access for organic products (WTO, 2023). Actively pursuing such agreements and leveraging existing frameworks like the Organic Trade Agreement (OTA) can provide crucial competitive advantages.

4. **Embracing value-added products:** Shifting from raw materials to processed and value-added organic products enhances profitability and strengthens brand recognition (Singh *et al.*, 2023). Investing in processing facilities, adopting innovative packaging solutions, and building strong brand narratives can unlock premium market segments.

5. **Harnessing digital technologies:** E-commerce platforms and digital marketing strategies offer cost-effective ways to reach global consumers and promote organic products directly (UNCTAD, 2023). Building partnerships with online retailers and influencers can significantly expand reach and visibility.

6. **Ensuring product quality and transparency:** Maintaining stringent quality standards through organic certifications and implementing robust traceability systems strengthens consumer trust and facilitates premium pricing (IFOAM, 2023). Participating in international trade fairs and promoting sustainable farming practices further enhance brand reputation.

7. **Fostering collaboration and knowledge sharing:** Building strong partnerships with research institutions, NGOs, and other stakeholders facilitates knowledge exchange, fosters innovation, and promotes collective marketing efforts (APEDA, 2023). Such collaborations can address challenges in areas like pest management, post-harvest storage, and logistics.

8. **Diversification beyond traditional products:** Moving beyond staple crops like rice and wheat, embracing high-value fruits, vegetables, and spices caters to diverse consumer preferences and unlocks premium markets (APEDA, 2023). For

instance, India's organic spice exports witnessed a 55% jump in 2022-23 (APEDA, 2023).

9. Exploiting niche markets: Catering to specific dietary needs like gluten-free or vegan offerings can attract niche consumer segments, particularly in developed countries (FiBL & IFOAM, 2023). Organic nutraceuticals and functional foods also offer promising avenues (APEDA, 2023).

10. Capitalizing on e-commerce: Online platforms offer direct market access to consumers, reducing dependence on traditional channels and expanding reach, particularly in developing countries with strong internet penetration (UNCTAD, 2023).

11. Strengthening brand and certification: Building a strong brand identity and adhering to rigorous international organic certifications like USDA NOP or EU Organic Regulation enhances consumer trust and commands premium prices (IFOAM, 2023).

12. Value addition and processing: Moving beyond raw materials, investing in processing facilities for value-added organic products like juices, jams, or frozen vegetables increases profit margins and caters to convenience-seeking consumers (APEDA, 2023).

13. Focus on sustainability: Highlighting environmentally responsible practices like water conservation, biodiversity preservation, and carbon sequestration resonates with environmentally conscious consumers and differentiates organic exports (FAO, 2021).

14. Collaboration and knowledge sharing: Fostering partnerships between farmers, exporters, and research institutions facilitates knowledge exchange, improves production practices, and promotes innovation in the organic sector (FAO, 2023).

15. Addressing infrastructure challenges: Investing in cold chain infrastructure, storage facilities, and efficient logistics networks minimizes post-harvest losses and ensures product quality,

particularly for perishable organic goods (APEDA, 2023).

16. Leveraging trade agreements: Utilizing existing free trade agreements and exploring new ones can reduce tariffs and open up new market opportunities for organic exporters (WTO, 2023).

17. Promoting transparency and traceability: Implementing blockchain technology or other traceability systems builds consumer trust by providing transparency about the origin, production methods, and journey of organic products (FiBL & IFOAM, 2023).

18. Investing in research and development: Supporting research on organic farming practices, pest management, and varietal development can improve yields, resilience, and adaptation to climate change, ultimately enhancing the competitiveness of organic exports (FAO, 2021).

## DISCUSSION

This delves into the intricate and often overlooked landscape of organic exports, with a specific focus on India, a rising star in the global organic market. While India boasts impressive growth in organic cultivation and exports, navigating the complex web of challenges and capitalizing on the captivating opportunities remain crucial for sustained success.

### Challenges:

1. Policy and regulatory inconsistency: Divergent regulations across importing nations create labyrinthine hurdles for Indian exporters. Streamlining international trade agreements and harmonizing organic certification processes could alleviate these difficulties.

2. Logistical bottlenecks and inadequate infrastructure: India's logistical infrastructure presents challenges in maintaining product integrity, particularly through efficient cold chain management. Investments in infrastructure and innovative solutions like temperature-controlled containers are necessary.

3. Competitive market dynamics: Established

distribution channels and consumer preferences for price over organic certification in international markets can be daunting for fledgling Indian exporters. Building brand recognition, focusing on niche markets, and emphasizing the unique value proposition of Indian organic products are crucial strategies.

Opportunities:

1. Collaborative efforts: Harmonization of policies and streamlining trade agreements through international collaborations can facilitate smoother flow of organic products across borders.

2. Technological advancements: Technological innovations in cold chain infrastructure, e-commerce platforms, and data-driven solutions can overcome logistical constraints and enhance market reach.

3. Consumer awareness and trust: Building consumer trust through transparent certification processes, targeted marketing campaigns, and educational initiatives can unlock significant market potential.

4. Strengthening producer organizations: Empowering farmers through cooperatives and producer organizations can provide collective bargaining power, market access, and knowledge sharing opportunities, propelling them onto the global stage.

By addressing the challenges and capitalizing on the opportunities, India can emerge as a major player in the global organic export market. Collaborative efforts, technological advancements, strategic marketing, and empowering farmers are key drivers for India's organic export journey. This review paper serves as a springboard for further research and policy interventions that can unlock the full potential of India's organic sector on the global stage.

## CONCLUSION

India's journey into the realm of organic exports is not without its fair share of hurdles. Navigating

complex international regulations, establishing robust logistical infrastructure, and building consumer trust in emerging markets present formidable challenges. Yet, amid these difficulties lie seeds of remarkable potential. Collaborative efforts towards policy harmonization, technological advancements in the cold chain, and targeted marketing campaigns can pave the way for smoother flow of organic products across borders.

Strengthening producer organizations and cooperatives can empower farmers with collective bargaining power, market access, and knowledge sharing opportunities, propelling them onto the global stage. By overcoming these challenges and capitalizing on its inherent strengths, India can unlock the tremendous potential of its organic sector, not only boosting its economy but also establishing itself as a leading player in the global organic market.

## FUTURE OUTLOOK

Organic farming's global boom presents India with a remarkable opportunity to capitalize on its inherent strengths and carve a niche in the international organic market. However, navigating this landscape demands addressing both formidable challenges and seizing captivating opportunities. Here's a glimpse into the future outlook for organic exports from India:

Challenges:

1. Logistics and infrastructure bottlenecks: Inadequate cold chain infrastructure, inefficient transportation networks, and limited storage facilities can compromise product integrity and hamper smooth export flow.

2. Policy inconsistencies and lack of harmonization: Divergent regulations and certification standards across importing countries pose compliance hurdles and limit market access.

3. Price sensitivity and competition: While domestic demand for organic produce is rising, Indian exports often face stiff competition from established players offering lower prices,

potentially sacrificing premium organic margins.

4. **Consumer awareness and brand building:** Building trust and brand recognition for Indian organic products in international markets requires targeted marketing campaigns and educational initiatives to enhance consumer awareness.

5. **Limited product diversification:** Reliance on traditional staples like spices and pulses restricts market reach and narrows revenue streams. Exploring value-added products, niche crops, and organic processed foods can unlock new avenues.

**Opportunities:**

1. **Government initiatives and policy support:** Continued government efforts like the National Mission on Sustainable Agriculture and schemes promoting organic clusters and infrastructure development can bolster the sector's export potential.

2. **Technological advancements:** Adoption of cold chain technologies, e-commerce platforms, and data-driven solutions can optimize logistics, reduce inefficiencies, and enhance traceability.

3. **Focus on quality and certifications:** Stringent adherence to international organic

standards, coupled with robust quality control measures, can solidify India's reputation as a reliable source of premium organic products.

4. **Collaboration and farmer empowerment:** Strengthening producer organizations and cooperatives can equip farmers with collective bargaining power, market access, and knowledge sharing opportunities, enabling them to compete effectively in the global arena.

5. **Embracing innovation and diversification:** Exploring organic dairy, poultry, and meat products, along with niche crops like quinoa and medicinal herbs, can cater to evolving consumer preferences and expand India's organic export basket.

By proactively addressing challenges and capitalizing on emerging opportunities, India can unlock its vast organic potential and establish itself as a leading player in the global organic market. The future holds immense promise for Indian organic exports, but it hinges on strategic collaborations, sustained policy support, and a relentless pursuit of innovation and quality.

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