



The Performance of Rice Industry in The World

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ABSTRACT

Rice is the staple food for over half the world's population. Approximately 480 million metric tons of milled rice is produced annually. China and India alone account for 50% of the rice grown and consumed. Rice is essential for food security since it supplies up to 50% of the calories consumed by millions of people in Asia who live in poverty. It is emerging as a significant staple food in Africa and Latin America. Since the beginning of the Green Revolution, rice output has increased at record rates. Nonetheless, in the global food trade, rice continues to be one of the most protected commodities. Vitamins and minerals are few in rice, and they are lost during milling. Rice-eating populations are more vulnerable to vitamin and mineral deficiencies. These deficits and the negative health impacts they are linked to may be addressed by improved rice fortification methods. In several nations, the rice sector is consolidating. For distribution or usage in government safety net programs that target the most vulnerable, particularly women and children, there are potential to fortify a sizable portion of rice. The implementation and promotion of rice fortification in nations require multispectral techniques.

Key words: World and India paddy production, op. stock, imports, exports, consumption, clo. stock.

I. INTRODUCTION

Rice is a staple for an estimated 3.5 billion people globally, is crucial for food security, particularly in developing nations where 870 million people suffer from chronic undernourishment. Over 520 million impoverished Asians rely on rice for up to 50% of their daily caloric intake. Since 1970, per capita rice consumption in sub-Saharan Africa has doubled, and it's also rising in Latin American and Caribbean nations. More than 200 million households in underdeveloped countries depend on rice for their livelihood.

The late 20th century saw significant advancements in rice production, largely due to the Green Revolution (1940s-1960s). Rice production increased by 130% from 1966 to 2000, whereas the populations in low-income countries rose by 90%. Modern rice varieties, including semi-dwarf, early-maturing types responsive to nitrogen fertilizers, account for approximately 84% of the growth in rice production and are grown on half the irrigated land, contributing to nearly three-quarters of global rice output. Yields in many Asian countries have quadrupled or tripled compared to pre-Green Revolution levels. Asia's rice demand is projected to increase by 70% in the next 30 years due to population expansion.

Currently, over 100 countries cultivate rice, yielding about 715 million tons of paddy rice (480 million tons milled rice) annually. 90% of the rice globally is produced by fifteen of these countries, with China and India together responsible for 50%. Asian nations collectively produce 90% of the world's rice, including Indonesia, Burma, Vietnam, Myanmar, Thailand, the Philippines, Japan, Pakistan, Brazil, South Korea, Nepal, and Sri Lanka. Pakistan's production is projected to rise from 5.5 million tonnes in 2022-23 to 10 million tonnes in 2024-25. Japan's production remains stable at 7.3-7.6 million tons, while Brazil and the USA show fluctuations. Nigeria saw substantial growth in 2023-2024 (7.23 million tonnes) before leveling off at 6.09 million tonnes in 2024-2025. The European Union experienced a decline in rice production between 2020 and 2023, with a slight recovery anticipated in 2024 and 2025.

OBJECTIVES

1. To analyse the performance of paddy production in the world.
2. To discuss the opening stock, production, consumption and exports of paddy of the world.
3. To study the opening stock, production, consumption, exports and closing stock of paddy in India.
4. To explain the paddy cultivation area in India



5. To present the average price earnings of paddy in India.

PERFORMANCE OF PADDY PRODUCTION IN THE WORLD

Table-1 presents the year-wise and country-wise performance of major rice producing countries in the world (milled production in million tonnes), presents a concise overview of rice production during from 2020-21 to 2024-25.

The dominant producers China & India are China consistently remained the largest producer, though its output showed minor fluctuations, dipping from 148.3 million tonnes in 2020-21 to 144.62 in 2023-24, before a slight recovery to 145.28 in 2024-25. India showed a notable upward trend, increasing from 121 million tonnes in 2020-21 to a projected 145 million tonnes in 2024-25, indicating significant growth in its rice production over the period.

Significant Asian producers (Indonesia, Vietnam, Thailand, Burma, Philippines) are Indonesia maintained a relatively stable production around 34-35 million tonnes, with a slight dip in 2023-24. Vietnam saw a consistent output around 20-27 million tonnes, with a projected slight

increase in 2024-25 compared to 2023-24. Thailand's production showed some fluctuation, reaching 20.2 million tonnes in 2022-23 and stabilizing around 20-20.1 million tonnes in the later years. Burma (Myanmar) and the Philippines showed relatively stable production figures throughout the period, largely staying in the 11-12 million tonnes range.

Other noteworthy producers (Japan, Pakistan, Brazil, USA, Nigeria, Egypt, South Korea, European Union) are Pakistan exhibited a significant recovery and projected increase, particularly after a dip in 2022-23 (likely due to factors like flooding, as mentioned in external sources), rising from 5.5 million tonnes in 2022-23 to a projected 10 million tonnes in 2024-25. Brazil and the USA showed some variations in production, while Japan maintained a relatively consistent output around 7.3-7.6 million tonnes. Nigeria demonstrated a substantial projected increase in 2023-24 (7.23 million tonnes) before settling at 6.09 million tonnes in 2024-25. The European Union's rice production showed a declining trend from 2020-21 to 2022-23, with a slight recovery projected for 2024-25.

Table-1
Major Rice producing countries in the world (milled production in million tonnes)

Country	2020-21	202201-22	2022-23	2023-24	2024-25*
China	148.3	148.99	145.95	144.62	145.28
India	121	129	135.5	132	145
Indonesia	35.2	34.4	34	33.5	34
Vietnam	27.1	27.33	27	27	26.5
Thailand	18.83	19.65	20.2	20	20.1
Burma	12.6	12.35	11.8	11.95	11.85
Philippines	12.4	12.47	12.6	12.5	12
Japan	7.57	7.64	7.48	7.3	7.35
Pakistan	8.1	8.7	5.5	9	10
Brazil	7.55	7.14	6.8	7.48	8
USA	7.23	6.09	5.09	6.93	7.05
Nigeria	5.04	5.26	5.36	5.23	5.23
Egypt	4.3	2.9	3.6	3.78	3.9
South Korea	3.74	3.88	3.76	3.7	3.59
European Union	1.99	1.72	1.34	1.43	1.67

Source: www.usda.gov *Estimated



The highlights of rice producing countries continued dominance of China and India in global rice production, with India showing a strong growth trajectory. Other major Asian producers maintain significant but fluctuating outputs, while countries like Pakistan show a notable recovery. The data also reveals the diverse production performances across various regions and countries.

The International Grains Council (IGC) world rice projections provides a comprehensive overview of the global rice market from 2020-21 to 2024-25, highlighting the performance based on stock levels and related supply-demand dynamics presented table-2.

During 2020-21 opened significant stocks at 173.8 million tonnes, followed by strong production at 502.8 million tonnes and imports of 46.5 million tonnes, leading to a total availability of 676.6 million tonnes. Consumption stood at 507.5 million tonnes, and exports matched imports at 46.5 million tonnes, resulting in a slight decrease in closing stocks to 169.2 million tonnes.

During the year 2021-22 the opening stocks were 169.2 million tonnes, with production increasing to 510.7 million tonnes, leading to a total availability of 679.8 million tonnes. Consumption also saw a modest increase to 508.7 million tonnes, while exports and imports remained similar to the previous year at 46.7 million tonnes each, contributing to a slight rise in closing stocks to 171.2 million tonnes.

During 2022-23 starting with 171.4 million tonnes, this year witnessed notable increases in production (521.3 million tonnes) and imports (53.8 million tonnes), pushing total availability to 692.7 million tonnes. The consumption rose to 519.5 million tonnes, and exports mirrored imports at 53.8

million tonnes, resulting in a further increase in closing stocks to 173.2 million tonnes.

During 2023-24 the building on increased stocks from the previous year (172.9 million tonnes), production continued its upward trend to 523.9 million tonnes, while imports saw another increase to 57.5 million tonnes, culminating in a total availability of 696.8 million tonnes. The consumption reached 523.1 million tonnes, and exports matched imports at 57.5 million tonnes, maintaining closing stocks at a steady 173.6 million tonnes.

During the year 2024-25 the projections for this year begin with opening stocks of 173.6 million tonnes, with further anticipated increases in production (533.8 million tonnes) and imports (57.7 million tonnes), leading to the highest total availability in the period at 707.5 million tonnes. The projected total consumption is 531 million tonnes, and exports are expected to match imports at 57.7 million tonnes, resulting in the highest projected closing stocks of 176.4 million tonnes within this period, indicating a comfortable supply outlook.

The analysis of the stock line items (Opening and Closing Stocks) reveals a general trend of increasing rice stock levels throughout the projected period, particularly towards the later years. While there was a slight dip in closing stocks from 2020-21 to 2021-22, the subsequent years show consistent growth in both opening and closing stocks, suggesting a generally robust global rice supply and a healthy carryover into future marketing years. The increases in production and, to a lesser extent, imports seem to comfortably outpace consumption and exports, leading to the accumulation of stocks.

Table-2
International Grain Council's World Rice Projections (in million metric tonnes)

Rice Stock	2020-21	2021-22	2022-23	2023-24	2024-25
Opening Stocks	173.8	169.2	171.4	172.9	173.6
Production	502.8	510.7	521.3	523.9	533.8
Imports	46.5	46.7	53.8	57.5	57.7
Total Availability	676.6	679.8	692.7	696.8	707.5
Total Consumption	507.5	508.7	519.5	523.1	531
Exports	46.5	46.7	53.8	57.5	57.7
Closing Stocks	169.2	171.2	173.2	173.6	176.4

Source: World rice projection, International Grains Council.



Table-3 presented the details of yearly flow of paddy, encompassing opening stock of paddy production, imports, and total availability of paddy, consumption, exports, total usage, closing stock and average monthly consumption from the financial years 2020-21 to 2024-25.

During 2020-21 the availability & usage started with opening stock of 30.48, significant production of 120.32, and no imports, resulting in total availability of 150.8. Consumption was 104.04, exports were 12, leading to total usage of 116.04. The closing stock carries out 34.76. The estimation production heavily dominated the supply, and usage was considerably less than availability, allowing for a good closing stock to the next year.

During 2021-22 the availability & the sage of carry in from the previous year was 33.3, production slightly increased to 122.85, and still no imports, leading to total availability of 156.15. Consumption saw a minor increase to 106.2, while exports significantly increased to 17.38, leading to total usage of 123.58. Carry out decreased to 32.57. Estimation is higher level of exports in this year contributed to a slight reduction in the carry out despite a marginal increase in production.

During 2022-23 the availability & usage carry in reduced to 42.11, production significantly increased to 135.54, and imports remained at zero, resulting in total availability of 148.06. Consumption continued its gradual increase to 109, while exports slightly decreased to 12.5, making total usage 121.5. Carry out saw a notable drop to 26.56. Estimation of a surge in production couldn't fully compensate for the reduced carry in and increased consumption, leading to a lower carry out.

During 2023-24 the availability & usage of carry in increased to 61.13, production dropped significantly to 78.495, and imports remained nonexistent, resulting in total availability of 184.94.

Consumption decreased to 100.4, and exports also significantly decreased to 8.54, leading to total usage of 108.94. The carry out massively increased to 76.0. Estimation of the despite a sharp decline in production, the lower consumption and exports, combined with a higher carry in, resulted in a substantial increase in the carry out stock.

During the year 2024-25 the availability & usage carry in rose to 78.495, production showed a strong rebound to 136.43, and imports remained at 0, pushing total availability to 214.925. Consumption increased again to 102.91, and exports also increased to 18.91, leading to total usage of 121.82. Carry out reached the highest level in the period at 93.105. Estimation of the combination of increased production and a high carry in led to the highest total availability and a significant increase in the carry out stock, indicating a healthy surplus.

Overall analysis result of production fluctuations shows a fluctuating pattern, with a dip in 2023-24 but a strong recovery in 2024-25. Consistent zero imports notably, there were no reported imports throughout this entire five-year period. This suggests either complete self-sufficiency in meeting demand through production and existing stock, or a policy that restricts imports. Consumption stability remained relatively stable across the years, hovering around 100-109, suggesting a consistent level of domestic demand. Variable exports showed more variability, with a peak in 2021-22 and a low in 2023-24, before increasing again in 2024-25. Increasing carry-out figure generally increased over the period, ending at its highest point in 2024-25, suggesting a growing surplus or inventory of the commodity. Average monthly consumption metric remained relatively stable as a percentage of total availability, ranging from 20 percent to 26 %, indicating a consistent proportion of available stock being consumed monthly.

Table-3
Year-wise paddy stock in India (in MMT)

Rice Stock	2020-21	2021-22	2022-23	2023-24	2024-25
Carry in (opening stock)	30.48	33.30	42.11	61.13	78.50
Production	120.32	122.85	135.54	123.81	136.43
Imports	0.00	0.00	0.00	0.00	0.00
Total Availability	150.80	156.15	148.06	184.94	214.93
Consumption	104.04	106.20	109.00	100.40	102.91
Exports	12.00	17.38	12.50	8.54	18.91
Total Usage	116.04	123.58	121.50	108.94	121.82



Carry out (closing stock)	34.76	32.57	26.56	76.00	93.11
Average Monthly Consumption	0.20	0.21	0.22	0.25	0.26

Source: www.agriwatch.com

The state-wise average price of paddy in India for the years from 2021 to 2025, here's a detailed analysis of paddy price performance presented table-4.

Overall general increase with fluctuations are the average price of paddy across India shows a notable increase from ₹1727.6 in 2021 to ₹2464.25 in 2025, with a significant jump in 2024 (₹2605.79) before a slight dip in 2025. This indicates a general upward trend in paddy prices over this period, likely influenced by factors like Minimum Support Price (MSP), demand-supply dynamics, and market conditions. Varied state performance while the national average shows growth, individual states exhibit diverse trends in paddy prices, with some experiencing steady increases, others showing

fluctuations, and a few even registering declines in certain years.

Highest price states are the Pondicherry consistently registers among the highest prices, peaking at ₹3165 in 2024 and maintaining a high of ₹3226 in 2025, showing a consistent upward trend. Rajasthan initially had the highest prices in 2021 and 2022 but saw a decrease in 2023, recovering slightly by 2025 but not reaching its earlier peak. Madhya Pradesh and Tamil Nadu show very high projected prices in 2024 (₹3514 and ₹3521 respectively), although Tamil Nadu's price drops significantly in 2025. Jharkhand stands out with an exceptionally high price in 2024 (₹4264), significantly higher than other states, though it drops in 2025.

Table-4
State-wise and year-wise average price of paddy in India

State	Prices 2021	Prices 2022	Prices 2023	Prices 2024	Prices 2025
Andhra Pradesh	1846.99	1852.29	1811.66	2232	2328
Chhattisgarh	1461.21	1528.06	1557.75	2286	2325
Gujarat	1346.08	1577.07	1646.51	2460	2217
Jharkhand	1752.5	1752.5	--	4264	2585
Karnataka	1921.92	1916.59	1970.22	2458	3400
Kerala	1910.11	1913.5	1965.38	2293	2296
Madhya Pradesh	1696.33	2124.69	2067.35	3514	2407
Maharashtra	1923.88	2220.18	1974.92	2734	2629
Odisha	1867.77	1833.07	1814.91	2930	2462
Pondicherry	1692.98	1712.3	1566.51	3165	3226
Punjab	1987.92	2014.99	1925	2212	3184
Rajasthan	2407.76	2389.66	2265.82	2309	2206
Tamil Nadu	1202.09	1318.75	1720.39	3521	1879
Telangana	1701.78	1616.58	1823.49	2254	2620
Tripura	1540.74	1672.58	1574.04	2270	2212
Uttar Pradesh	1502.95	1540.39	1727.72	2054	2247
West Bengal	1866.46	1842.07	1831.33	2177	2246
Average	1727.6	1800.64	1827.69	2605.79	2464.25

Source: www.agmarknet.gov.in



Significant growth states are the Gujarat shows substantial growth, more than doubling its price from ₹1346.08 in 2021 to ₹2217 in 2025. Maharashtra also demonstrates a good increase, especially in 2024 (₹2734) before moderating in 2025. Karnataka experienced a notable surge in 2025 (₹3400) after steady growth in previous years. Fluctuating or moderate growth states are Andhra Pradesh, Chhattisgarh, Kerala, Odisha, Punjab, Telangana, Tripura, Uttar Pradesh, and West Bengal show more moderate increases or fluctuations across the period compared to the high-growth states, maintaining a relatively stable, yet increasing, price trajectory overall.

The major Key role of the regional disparities which the data highlights significant regional disparities in paddy prices, likely due to varying production levels, local demand, market access, and state-specific agricultural policies or infrastructure. Volatile projections which the projected prices for 2024 and 2025 show considerable volatility in some states (e.g., Jharkhand, Tamil Nadu, Karnataka), suggesting potential market shifts or changes in estimation factors. Importance of policy & market factors are the variations in prices underline the influence of factors beyond just cultivation, including government policies (like MSP which was ₹2183 for common paddy in 2023-24 and ₹2369 in 2025-26), regional demand-supply gaps, and farmer income stability.

The details of state-wise area under paddy production in India during from 2020-21 to 2024-25, here's a detailed year-wise analysis of paddy area performance presented in table-5.

Telangana shows a consistent and significant increase in paddy area over the five years, rising from 32.11 % in 2020-21 to 53.43 % in 2024-25, making it the state with the highest percentage of total area under paddy in the latest reported year.

Tamil Nadu experienced a decline in paddy area from 29.83 % in 2020-21 to 22.65 % in 2022-23, followed by a recovery in 2023-24 (26.75 %) and a slight increase in 2024-25 (28.32 %), though still lower than its 2020-21 levels.

Andhra Pradesh demonstrates a notable decrease in paddy area, dropping significantly from 19.36 % in

2020-21 to a low of 10.12 % in 2023-24, before showing a recovery to 16.07 % in 2024-25, yet still below its initial percentage.

West Bengal & Assam both states exhibit fluctuating trends, with significant drops to zero percent in some years (West Bengal in 2022-23 and 2024-25. Assam in 2024-25), indicating potential shifts in cropping patterns or other influencing factors in those specific years. West Bengal, despite its historical importance in rice production, shows a high variability in the reported data for these specific years.

Odisha & Chhattisgarh odisha shows a sharp increase in 2022-23 to 19.81 %, then a significant drop, suggesting a one-time surge or data anomaly for that year, followed by a decline to zero percent in 2024-25. Chhattisgarh also shows a drastic drop to zero percent in 2022-23 and 2024-25 from initial low percentages, similar to West Bengal and Assam's pattern.

Kerala maintained a relatively small percentage of paddy area, with some years showing zero cultivation (2021-22, 2023-24), and only 1.6 % in 2024-25.

Other category states represents a collective of smaller states or regions, showing high variability and significant increases in specific years (19.81 % in 2022-23), potentially reflecting diverse agricultural practices or data aggregation patterns across multiple minor contributors.

The overall summary reveals that the dynamic shifts in the relative share of states in India's total area under paddy cultivation. While Telangana consistently increased its share, other traditional rice-producing states like West Bengal, Andhra Pradesh, and Odisha show more volatile year-on-year changes, including instances of zero reported area in certain periods, which might indicate localized factors, crop diversification efforts, or data reporting specificities during those years. The other category's fluctuating high percentages in some years also point to the collective impact of smaller regional contributions to the national paddy landscape.

Table-5
Year-wise and state-wise production area under Paddy in India

State	2020-21	2021-22	2022-23	2023-24	2024-25
	%total area	%total area	%total area	%total area	%total area
Telangana	32.11	34.6	42.37	45.63	53.43
Tamil Nadu	29.83	28.37	22.65	26.75	28.32



Andhra Pradesh	19.36	16.09	10.22	10.12	16.07
West Bengal	7.15	9.06	0	6.63	0
Assam	4.06	4.39	3.54	3.78	0
Odisha	2.84	1.88	19.81	7.09	0
Chhattisgarh	2.39	1.6	0	0	0
Kerala	2.21	0	1.54	0	1.6
Other	0.05	4.01	19.81	7.09	0.58
Total	100	100	100	100	100

Source: www.agmarknet.gov.in

Year-wise and state-wise analysis of paddy production performance in India refers to Million Metric Tonnes (MMT) of paddy/rice production presented table-6.

India's total paddy production shows a general upward trend over the observed period, increasing from 126.98 MMT in 2020-21 to 141.77 MMT in 2024-25, despite a dip in 2021-22 and 2022-23.

The year 2024-25 witnessed a notable increase in total production, rising from 128.53 MMT in 2023-24 to 141.77 MMT, indicating a strong performance in the latest reported year.

The West Bengal consistently ranks high in production, hovering around 15-16 MMT throughout the period. Uttar Pradesh shows a strong upward trajectory, particularly in 2024-25 where its production surged to 21.70 MMT, making it a top producer. Punjab maintains a significant level of production, generally above 11 MMT.

Fluctuating performance states
Telangana experienced remarkable volatility, with production dropping significantly in 2021-22 and 2022-23 before a massive surge to 16.87 MMT in 2023-24 and then a decrease in 2024-25 to 8.17 MMT. Odisha shows a declining trend in later years, with a sharp drop in 2023-24 to 7.30 MMT

from 13.61 MMT in 2022-23. Madhya Pradesh also demonstrates variability, with a high of 14.12 MMT in 2020-21, a significant dip in subsequent years, and then a strong recovery in 2024-25 to 21.21 MMT.

Moderate and stable producers of Bihar, Chhattisgarh, and Tamil Nadu generally maintain relatively stable production levels within a similar range (around 7-9 MMT for Bihar and Chhattisgarh, and 6-8 MMT for Tamil Nadu).

Lower producer's states like Maharashtra, Gujarat, Uttarakhand, Kerala, Jammu & Kashmir, Rajasthan, and Himachal Pradesh consistently have lower production volumes compared to the major paddy-growing states, generally below 5 MMT.

Paddy production in India is heavily reliant on a few major states like West Bengal, Uttar Pradesh, Punjab, Telangana, and Madhya Pradesh. Significant year-on-year fluctuations are observed in some states, potentially due to factors like weather patterns, irrigation availability, and agricultural policies. The overall trend suggests a gradual increase in paddy production, crucial for India's food security.

Table-6

Year-wise and state-wise performance of paddy production in India

(Value in MMT)

States	2020-21	2021-22	2022-23	2023-24	2024-25
West Bengal	15.75	15.89	15.75	15.69	15.75
Uttar Pradesh	14.22	15.27	15.99	15.99	21.70
Punjab	12.23	11.82	13.99	14.39	14.68
Odisha	11.68	9.20	13.61	7.30	8.47
Andhra Pradesh	13.42	7.79	7.94	7.49	8.02
Bihar	6.88	7.72	7.02	7.00	8.90
Chhattisgarh	9.81	8.00	8.96	9.15	9.70



Tamil Nadu	7.28	8.07	7.50	7.56	6.80
Assam	5.21	3.43	6.04	5.14	4.72
Telangana	4.11	1.78	1.75	16.87	8.17
Haryana	4.40	5.63	4.14	6.99	5.16
Madhya Pradesh	14.12	13.19	8.50	7.24	21.21
Maharashtra	2.90	3.44	2.90	1.46	3.44
Gujarat	1.98	1.30	0.91	1.77	2.27
Uttarakhand	0.60	0.56	0.78	2.88	0.80
Kerala	0.60	0.56	0.46	0.56	0.24
Jammu & Kashmir	0.59	0.40	0.42	0.39	0.41
Rajasthan	0.48	0.32	1.70	0.48	1.17
Himachal Pradesh	0.73	0.13	0.24	0.19	0.16
Total	126.98	114.50	118.59	128.53	141.77

Source: www.agmarknet.gov.in

II. CONCLUSION

For the great majority of people in the developing countries, rice is directly related to food and nutrition security. The globe has witnessed unprecedented gains in rice output, starting with the Green Revolution, which brought new rice varieties and advanced farming technologies. Nonetheless, in the global food trade, rice continues to be one of the most protected commodities. Just 7% of the world's rice production is traded internationally, even as market structures in emerging nations have been liberalized. It emphasizes how China and India continue to dominate the world's rice output, with India exhibiting a robust growth trajectory. While nations like Pakistan exhibit a noticeable comeback, other big Asian producers continue to generate considerable but erratic amounts. Production growth and, to a lesser degree, import growth appear to easily surpass export and consumption growth, resulting in stockpiling. More fluctuation was seen in exports, which peaked in 2021–2022 and fell in 2023–2024 before rising once more in 2024–2025. Over time, the closing stock increased, reaching its peak in 2024–2025 as the commodity's surplus or inventory grew.

The possible changes in estimating parameters or market developments the price fluctuations highlight the impact of factors other than farming, such as regional demand-supply imbalances, farmer income stability, and government policy, which set the price of common paddy at ₹2183 in 2023–2024 and ₹2369 in 2025–2026. Improved rice fortification methods could help these populations deal with vitamin and mineral deficiencies and the negative health impacts that go along with them. It would be simpler to put

policies into place to build facilities to fortify rice for both local consumption and export given that the majority of exports originate in a very small number of nations, and that only 15 countries, primarily in Asia, produce the majority of the world's rice. There may be several crucial locations along the supply chain from the farmer to the mill to the distribution warehouse where rice fortification can be used. A sizable portion of rice produced by the big mills may be able to be fortified for commercial distribution or use in extensive government safety net programs that assist the most vulnerable, particularly women and children, as a result of the consolidation of the rice industry in many nations. The implementation and promotion of rice fortification in nations require multispectral techniques.

REFERENCES:

- [1]. Production-Rice, Foreign Agricultural Service, United States Department of Agriculture: Rice, USDA Foreign Agricultural Service.
- [2]. Singh, K.M. & Ahmad, Nasim & Pandey, Vagish Vandana & Kumari, Tulika & Singh, Ritambhara, 2021. "Growth Performance and Profitability of Rice Production in India: An Assertive Analysis," MPRA Paper 110635, University Library of Munich, Germany, revised 10 Jul 2021.
- [3]. Thomas J, Karunakaran N. Direction of India's rice exports in the post-liberalization era. J Manag Res Anal 2021.
- [4]. Ramakrishna, and C. Degaonkar. "Rice export from india: trends, problems and prospects". International Journal of Research



- GRANTHAALAYAH, vol. 4, no. 7, July 2016.
- [5]. Central Government is implementing the National Food Security Mission - Nutri Cereals; PIB Press Release dated 12 December 2023 (Press Release ID: 1985475)
- [6]. Ohlan, Ramphul. (2018). Agricultural exports and the growth of agriculture in India. Agricultural Economics.
- [7]. <https://apeda.gov.in/apedawebsite/>
- [8]. <https://commerce.gov.in/trade-statistics/>