**AGRICULTURAL EXPORT IN INDIA: PERFORMANCE AND PROSPECTS**

**ABSTRACT**

 The study examines the Indian agricultural exports in recent years. It examines the developments in agricultural commodity exports from India, explores shifts in comparative advantage, and assesses the changes observed in Indian agricultural exports over the past decade. Furthermore, the study discusses the potential for enhancing agricultural exports in the future. The study findings indicate a decline in the global share of agricultural exports from India compared to leading exporting nations. Analyzing specific products, the export shares of cereals, spices, rice, maize, and meat & offals have increased, while wheat & meslin, coffee, tea, fish, vegetables & tubers, and fruits and nuts have experienced a decline in export shares from 2003 to 2013. Rice has maintained a consistent export share from 2014 to 2023, while other commodities have seen varying trends. However, examining the growth rates from 2003 to 2014, there has been significant positive growth in exports of maize, meat & offals, fruits & nuts, spices, cereals, rice, coffee, vegetables & tubers, fish, and tea, with notable variations among commodity groups. Conversely, wheat & meslin experienced negative growth. However, from 2014 to 2023, growth rates have declined for cereals, spices, rice, wheat & meslin, maize, coffee, tea, fish, vegetables & tubers, fruits and nuts, with meat & offals exhibiting a negative growth rate. In light of these findings, the study recommends that the government strategically promote exports across different sectors by offering tailored incentives, making industry-friendly rules, and focusing on competitiveness. This approach aims to capitalize on opportunities, address existing gaps, and further stimulate growth in Indian agricultural exports.

**Keywords:** Agricultural export, Comparative advantage growth rate, India.

**INTRODUCTION**

Agriculture in India is the backbone of our civilization, providing a living for more than half of the population. It is one of the most vital jobs for Indian households (Kumareswaran *et al.,* 2018). In the fiscal year 2021-22, the agricultural sector contributed 19% to the gross value added at current prices and engaged 45.5% of the nation's workforce, demonstrating a 4.6% annual growth from 2014 to 2022. Leveraging advantageous agro-climatic conditions, India is the foremost global producer of diverse agricultural commodities. Approximately 12% of total exports are attributed to this sector. Since the economic reforms in 1991, India has consistently maintained a positive net export of agricultural products, reaching US$ 50.2 billion in agricultural exports and US$ 28.27 billion in imports during the 2021-22 fiscal year (Saxena *et al.*, 2023). In 2011, the contribution of Indian agricultural trade constitutes merely around 1.6% of the total global agricultural trade (Suresh and Mathur, 2016). The share of agricultural exports in gross value added from agricultural and allied activities increased from 7.12% in 2002-03 and peaked at about 14% in 2013-14, then decelerated to 7.3% in 2019-20. However, the share of agricultural exports in agriculture GVA has increased after 2019-20 and reached 9.5% in 2021-22. Similarly, agriculture exports as a percentage of total exports 14.2% in 2001-02, which declined to 9.71% in 2010-11. However, with concerted policy facilitation, the share increased to 11.95% in 2021-22 (Saxena *et al.*, 2023). More than 75% of India's agricultural exports are cereals, cotton, fish and crustaceans, sugar and sugar confectionery, coffee, tea, spices, and edible meat. Among these groups, rice, crustaceans, bovine meat, pepper, tea, cane sugar, and cotton are the most exported agricultural commodities from India (Saxena *et al.*, 2023). Despite these factors, India's presence in the global export market is limited, primarily due to the insufficient participation of farmers in the export process. Export activities are foundational for a country's overall growth trajectory. As a result, there is a need to expand export while addressing quality factors and lowering pesticide consumption, as these commodities are critical to increasing the country's foreign exchange reserves. The export value serves as a substantial contributor to foreign exchange earnings in the agricultural sector, thereby reinforcing the country's Balance of Payment. Elevating export rates can be a pivotal strategy for developing nations, as it facilitates the accumulation of international liquidity; this, in turn, addresses issues related to reserves and provides the necessary financial foundation to initiate various projects, breaking the cycle of poverty (Patil *et al.,* 2020). With this backdrop, this study aimed to evaluate the percentage of agricultural exports to national exports, the top exporting nations' export share, and the composition of changes in agricultural exports.

**MATERIAL AND METHODS**

The study examines the export outcome of agricultural commodities, their contribution to total agricultural exports, and the share of leading agricultural export countries, along with compositional changes in principal commodities. Data for this analysis were collected from various sources, including the Ministry of Commerce's export-import data bank and the World Trade Organization. Initially, the study calculated the relative agricultural export shares to national exports by DGCI &S. To assess the agriculture export share in relation to leading export countries with the help of world trade data and to examine the compositional changes of agricultural principal commodities (the focus on crop-origin items, with major crop groups such as cereals, spices, fruits and nuts, rice, meat, vegetables, and wheat and meslin) by Ministry of Commerce and Industry (Department of Commerce). Compositional changes in export data were analyzed using growth rates. These growth rates were calculated using a semi-log growth model and ordinary least squares (OLS) regression.

 Ln Yt = a + bt……..(1)

The variable under study is Y, and the time in years is t.

The formula was used to calculate the growth rate.

 r = (exp(b)-1)\*100 ……….(2)

We chose the semi-log growth mode because it provided the greatest match and was the easiest to comprehend.

**RESULTS AND DISCUSSION**

Table 1 demonstrates that exports of all product groups increased in value terms from 2003-04 to 2012-2013 under consideration. However, the composition of exports changed, with an increase in the percentage of meat, cereals, spices, rice, and maize and a decrease in the percentage of wheat and meslin, fish, fruits, vegetables, tea, & coffee. Cereals (3.35%), rice (2.47%), fish (1.53%), spices (0.93%), and meat (1.4%) were the top exports. Despite the fall in commodity share, all commodity categories have shown considerable positive growth rates with the exception of wheat and meslin. Significant sectors with the highest growth rates include maize (39.83%), beef (28.26%), rice (19.71%), and cereals (19.82%). The export of marine goods (11.57%) has recently slowed, owing mostly to lower demand in the European and American markets. Furthermore, marine fish output has been stagnant in recent years. This increase in exports was facilitated by increased productivity as a result of R&D activity (Rajendran *et al*. 2005).

In contrast, the analysis of the period spanning from 2012-2013 to 2022-23 indicates an overall decline in the value of exports across all commodity groups. Despite this decline, a notable shift in the export composition is observed, primarily marked by rise in the proportion of meat and offals, which experienced a growth of 0.72%. With the exception of meat and offals, all commodity groups have demonstrated noteworthy positive growth rates. The significant sectors, including maize (6.57%), rice (4.37%), cereals (4.48%), fish (3.74%), spices (5.8%), wheat and meslin (7.43%), coffee (2.21%), tea (0.38%), vegetables (2.69%), and fruits and nuts (8.5%), have exhibited positive trends. The compound annual growth rate for agricultural exports was 17.0% in the first decade and 6.2% in the second decade. However, these growth rates appear less impressive when compared to the preceding decades, particularly the period from 2003-13, during which the agriculture export growth rate was notably higher than that observed from 2014-2023. The agricultural output in India is slightly higher than the population growth rate, indicating the need for an increased acceleration in the growth rate of the agriculture sector. A substantial explanation for this comparative underperformance lies in the imposition of restrictive export policies that prioritize domestic consumers at the expense of farmers, indicating a prevalent urban consumer bias. This approach imposes a considerable "implicit tax" on farmers, highlighting a need for a reevaluation and redesign of agri-export policies. To thrive in premium export markets, it is imperative to adopt strategies that focus on long-term development and maintenance (Ashok Gulati October 30).

**Table 1: Transformations in the composition of India's agricultural exports from 2003-04 to 2014-2023.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Value(US$million)** | **Growth rate****[2003-13]****%** | **Growth rate****[2014-2023]****%** |
| **2003-2004** | **2013-2014** | **2022-2023** |
|  | %Share |  | % Share |  | %Share |
| **Cereals** | 1513.91 | 2.37 | 10562.89 | 3.35 | 13857.95 | 3.07 | 19.82 | 4.48 |
| **Spices** | 73.07 | 0.11 | 293.66 | 0.93 | 491.94 | 0.10 | 22.06 | 5.80 |
| **Rice** | 907.04 | 1.42 | 7789.75 | 2.47 | 11143.24 | 2.47 | 19.71 | 4.37 |
| **Wheat& Meslin** | 520.36 | 0.81 | 1569.03 | 0.49 | 1519.69 | 0.33 | -23.18 | 7.43 |
| **Maize** | 77.14 | 0.12 | 1009.87 | 0.32 | 1116.17 | 0.24 | 39.83 | 6.57 |
| **Coffee** | 162.24 | 0.25 | 540.02 | 0.17 | 750.62 | 0.16 | 15.95 | 2.21 |
| **Tea** | 337.78 | 0.52 | 760.58 | 0.24 | 740.38 | 0.16 | 11.34 | 0.38 |
| **Meat & Offals** | 368.62 | 0.57 | 4475.53 | 1.4 | 3273.35 | 0.72 | 28.26 | -4.45 |
| **Fish** | 1236.29 | 1.93 | 4823.02 | 1.53 | 6823.38 | 1.51 | 11.57 | 3.74 |
| **Vegetable & Tubers** | 328.61 | 0.51 | 1356.07 | 0.43 | 1915.54 | 0.42 | 13.24 | 2.69 |
| **Fruits& Nuts** | 9.74 | 0.015 | 0.86 | 0.0003 | 0.12 | 0.0001 | 22.71 | 8.50 |
| **Total** | 6834.2 |  | 23450.75 |  | 26,717.72 |  | 17.0 | 6.2 |

Source: Authors own calculation using data Ministry of Commerce, GoI.

Table 2 depicts India's export share in terms of chosen commodities and agricultural exports, total national agricultural exports, and their respective value (in US$ billion) between 2003 and 2023. The findings indicated that In­dia's exports reached from US$ 63.84 billion to US$ 451.07 billion. On the other hand, total agriculture exports reached from US$ 7.92 billion to 52.50 billion. In 2013-14, the final year of the UPA administration, India's agri-exports reached $43.27 billion, up from $8.67 billion when it assumed control at the Centre in 2004-05; this represents an almost five-fold increase in ten years. If the same momentum had been maintained during the NDA's ten years in power, agricultural exports would have reached $200 billion. However, they may not reach $50 billion this year (2023-24) (Ashok Gulati). India, with the world's second-largest population and fifth-largest economy, is now ranked 13th in global commerce. The country has earned a substantial US$ 623 billion in merchandise trade and US$ 294 billion in services trade. Between 1960-61 and 2013-14, the percentage of total exports represented by agriculture and allied products in the Indian economy decreased from 44.2 percent to 13.6 percent (Indian Economy). Subsequently, from 2013-14 to 2022-23, India's share in the global agricultural export market witnessed a decline, dropping from 13.79 percent to 11.63 percent.

**Table 2: India's Exports of Agricultural Commodities (US$ Billion)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Agricultural** **Exports**  | **Total National** **Exports**  | **% of Agricultural** **Exports to Total National Exports**  |
| **2003-04** | 7.92 | 63.84 | 12.41 |
| **2004-05** | 9.26 | 83.54 | 11.08 |
| **2005-06** | 10.32 | 103.09 | 10.02 |
| **2006-07** | 12.76 | 126.26 | 10.10 |
| **2007-08** | 18.56 | 162.98 | 11.39 |
| **2008-09** | 17.65 | 183.10 | 9.64 |
| **2009-10** | 17.81 | 178.32 | 9.99 |
| **2010-11** | 24.80 | 249.46 | 9.94 |
| **2011-12** | 38.14 | 305.90 | 12.47 |
| **2012-13** | 42.70 | 307.14 | 13.90 |
| **2013-14** | 43.43 | 314.87 | 13.79 |
| **2014-15** | 39.20 | 310.15 | 12.64 |
| **2015-16** | 32.90 | 262.17 | 12.55 |
| **2016-17** | 33.79 | 275.74 | 12.26 |
| **2017-18** | 39.03 | 303.55 | 12.86 |
| **2018-19** | 39.27 | 330.04 | 11.90 |
| **2019-20** | 35.93 | 315.32 | 11.40 |
| **2020-21** | 41.56 | 292.76 | 14.20 |
| **2021-22** | 49.59 | 422.00 | 11.75 |
| **2022-23** | 52.50 | 451.07 | 11.63 |

Source: DGCI & S

Figure 1. Graphical Presentation of Agricultural Commodities in Relation to Total National Exports

Table 3 provides insights into the percentage share of agricultural exports for key countries from 2003 to 2023. The United States holds the top position as the leading exporting country throughout this period, although its share of agricultural exports has experienced a gradual decline from 11.18 percent to 9.55 percent. Brazil ranks second in terms of agricultural exports, with its share increasing from 3.55 percent to 6.36 percent. China occupies the third position, witnessing a rise in the share of agricultural exports from 3.15 percent to 4.14 percent. Canada's agricultural export share has fallen from 4.96 to 3.93, while Australia's proportion has remained stable from 2.40 to 2.40. In contrast, India experienced a notable increase in its share of agricultural exports from 1.06 percent to 2.35 percent between 2003 and 2013. However, in the subsequent period from 2013 to 2022, there was a decline in India's share, decreasing from 2.71 percent to 2.35 percent. It is worth noting that India's overall investment in agricultural research and development, encompassing both central and state contributions, hovers around 0.5 percent of the agricultural GDP, as highlighted by Ashok Gulati. In comparison, developed countries like the USA and Japan allocate approximately 6.9 percent and 14.5 percent of their agricultural GDP to agricultural research and development, respectively. Conversely, according to the trends in agricultural research and development in India, developing countries allocate less than 1 percent of their agricultural GDP to such endeavors. This allocation is considered insufficient and needs an immediate doubling, if not tripling, to propel India into a powerhouse of agricultural production and exports (Ashok Gulati).

**Table 3: Agriculture Export Share (%) of Countries**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Australia** | **Brazil** | **Canada** | **China** | **India** | **USA** |
| **2003** | 2.40 | 3.55 | 4.96 | 3.25 | 1.06 | 11.18 |
| **2004** | 2.82 | 3.94 | 5.17 | 3.09 | 1.13 | 10.20 |
| **2005** | 2.50 | 4.13 | 4.86 | 3.39 | 1.21 | 9.78 |
| **2006** | 2.35 | 4.19 | 4.69 | 3.45 | 1.32 | 9.83 |
| **2007** | 1.98 | 4.26 | 4.31 | 3.43 | 1.44 | 10.04 |
| **2008** | 1.95 | 4.56 | 4.03 | 3.15 | 1.58 | 10.44 |
| **2009** | 2.00 | 4.89 | 3.71 | 3.47 | 1.39 | 10.17 |
| **2010** | 2.00 | 5.06 | 3.85 | 3.81 | 1.71 | 10.53 |
| **2011** | 2.27 | 5.24 | 3.65 | 3.92 | 2.09 | 10.20 |
| **2012** | 2.32 | 5.25 | 3.80 | 4.00 | 2.56 | 10.41 |
| **2013** | 2.17 | 5.23 | 3.79 | 4.05 | 2.71 | 10.15 |
| **2014** | 2.21 | 5.03 | 3.90 | 4.26 | 2.46 | 10.44 |
| **2015** | 2.30 | 5.10 | 4.06 | 4.64 | 2.21 | 10.43 |
| **2016** | 2.13 | 4.85 | 3.98 | 4.76 | 2.09 | 10.37 |
| **2017** | 2.43 | 5.07 | 3.85 | 4.53 | 2.24 | 9.74 |
| **2018** | 2.28 | 5.13 | 3.82 | 4.57 | 2.15 | 9.47 |
| **2019** | 2.16 | 4.98 | 3.63 | 4.57 | 2.09 | 9.22 |
| **2020** | 1.83 | 5.15 | 3.85 | 4.32 | 2.15 | 9.42 |
| **2021** | 2.17 | 5.17 | 4.07 | 4.12 | 2.35 | 9.38 |
| **2022** | 2.40 | 6.36 | 3.93 | 4.14 | 2.35 | 9.55 |

Source: Computed by the author using WTO data

Figure 2. Graphical Presentation of the percentage share of agricultural exports

**CONCLUSION**

The current investigation has assessed the export trends of agricultural commodities from India over the last decade and explored possibilities for enhancement. The findings indicate a decline in India's share of agricultural exports when compared to other nations such as the USA, Canada, Brazil, China, and Australia. The share of agriculture export to national export has been declined. The growth rate of the agricultural commodities export have been quite impressive from 2003 to 2013 however this growth rate has been declined during 2014 to 2023. During 2003-2014 the share of cereals (2.37%- 3.35%), spices (0.11-0.93%), rice (1.42-2.47%), Maize (0.12-0.32%), and Meat & offals (0.57-1.4%) have been raised. On the other hand the share of wheat & meslin (0.81-0.49%), coffee (0.25-0.17%), tea (0.52-0.24%), fish (1.93-1.53%), vegetable & Tubers (0.51-0.43%), and fruits & nuts (0.015-0.0003%) have been declined during this period. However during 2014-2023 the share of cereals (3.35-3.07%), spices (0.93-0.10%), Maize (0.32-0.24%), and Meat & offals (1.4-0.72%), wheat & meslin (0.49-0.33%), coffee (0.17-0.16%), Tea (0.24-0.16%), Fish (1.53-1.51%), vegetable & Tubers (0.43-0.42%), and fruits & nuts (0.0003-0.0001%) have been decreased except rice has a stagnant share (2.47-2.47%) during this period. The overall share of agriculture commodities have been declined from 2013-2023. Consistent growth rate was noted in case of maize (39.83%), meat & offals (28.26%), fruits & nuts (22.71%), spices (22.06%), cereals (19.82%), coffee (15.95%), veg & tubers (13.24%), fish (11.57%). On the other hand wheat & meslin (-23.18%) has a negative growth rate during 2003-2013. During 2014-2023 the growth rate of cereals (4.48%), spices (5.80%), rice (4.37%), wheat & meslin (7.43%), maize (6.57%), coffee (2.21%), tea (0.38%), fish (3.74%), veg & tubers (2.69%), fruits & nuts (8.50%) and meat and offals has negative growth rate (-4.45%). The overall growth rate of commodities have been declined. Establishing agricultural export clusters can serve as a solution to connect farmers with industries and facilitate the export of agricultural products.

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