



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

A Study on India's Fennel Exports

Dr. R. Rajah

Assistant Professor in Economics, Gobi Arts & Science College (Autonomous), Gobichettipalayam, Erode, Tamil Nadu, India.

ABSTRACT

This study was focus on India's fennel exports. Fennel Exports value and quantity showed a positive growth rate which is attributed to the increase in production of fennel. The export value and quantity of fennel exemplified high instability. Last few years fennel exports were decreased due to economic slowdown, low rainfall, heavy competition and low price. Appropriate measures should be taken to stabilize the prices in domestic and international markets. The supply of fennel should be regulated in order to prevent fall in price. As majority of fennel growing farmers are small and marginal farmers incentives should be given to prevent them from shifting to other crops.

Key words: Growth, Instability, Exports, Price, Crop.

Introduction

Fennel history traces all the way back to Pliny (AD 23-79), the Roman creator of *The Naturalis Historie*. He accepted that snakes ate and scoured against fennel since it had the option to work on their visual perception in the wake of shedding their skins. Following that perception, Pliny accepted fennel was amazing to such an extent that he utilized the fragrant spice to treat 22 distinct infirmities. In our fennel history timetable, we go to the 1300s. We realize that fennel was a staple in the family of King Edward I of England. His closet account books from 1281 recorded an acquisition of 8 1/2 pounds of fennel seed a month's stock. Why to such an extent? Fennel seed was utilized as a sauce and a craving suppressant. On Church commanded 'Fasting dayes', the loyal utilized fennel to overcome the day, a practice brought to the United States by the Puritans. They would carry cloths with fennel seed to snack on during long administrations to fight off hunger; which prompted fennel seeds regularly being alluded to as 'meetin' seeds.

Fennel seeds have a conspicuous long and meager shape and are light green or brown in shading. Its whitened shoots can be devoured as a vegetable. Other than its various culinary uses, fennel seeds offer a wide cluster of medical advantages. Since days of yore, fennel has been utilized to animate stomach related discharges essential for appropriate processing and retention of food. Chomping on a couple of fennel seeds will improve and invigorate your breath after a supper. Drinking fennel tea consistently assists flush with trip overabundance liquids from the body as it fills in as a diuretic. Fennel is one of the greatest plant wellsprings of potassium, sodium, phosphorus, and calcium and is considered valuable for the heart. Fennel is plentiful in dietary fiber and nutrients. It is utilized in different conventional frameworks of medication like in the Ayurveda, Unani, Siddha, and in the Indian and Iranian customary frameworks of elective medication. It is utilized to treat different afflictions going from hack/cold and slices to exceptionally confounded sicknesses like kidney diseases and malignancy. It additionally has a wide scope of veterinary employments. India is perhaps the biggest exporter of fennel. The nation's affection for fennel has been everlasting.

Review of Literature

Azad Rahman, Delwar Akbar, Sanjaya Timilsina, Tienke Trotter, Michael Thomson and Surya Bhattarai (2020) This paper investigates the current and future trends of the Australian and international fennel market. Australia's domestic market for fennel and other similar spices is entirely supplied through imports. In 2018, Australia imported about 568tonnes of the spice group in question, worth about US\$1.37million. The majority of imported spices in Australia are produced in India and China. Australia has the potential to enter into the commercial production of fennel by first targeting the domestic market, which has a current value of around US\$1.4million. A more accurate assessment of potential market value for domestic crops will depend on the quality of the fennel seeds. This needs to be ascertained through trial production before production is assessed on a commercial scale. The current CRCNA 'Spicing up the North' project is designed to provide scientific information about fennel varietal performance and environmental suitability, which will go some way to addressing these questions. The project will also assess the gross margins of fennel production in Australian conditions during the verification and commercialization phases.

Methodology

The purpose of this paper is to study on India's fennel exports during the period from 2000-01 to 2021-2022. For this purpose, the secondary data on India's fennel exports have been gathered from Annual Reports of Spices Board, Government of India. The collected data were analyzed with the help of econometrical tools such as Linear Trend Model, Semi-log Model, Compound Growth Rate Model and Cuddy Della Valle Index Model. By using SPSS 19 software, the analysis has been done.

Linear Trend Model

$$Y = \beta_0 + \beta_1 t + U_t$$

Where,

Y = Dependent Variable.

β_0 = Intercept

β_1 = Coefficient

't' = Denote the time period in terms of the number of years.

U_t = Disturbance term

Semi-Log Model

$$\text{Log } Y = \beta_0 + \beta_1 t + U_t$$

Compound Growth Rate Model

$$\text{CGR} = [(\text{Antilog } b - 1) \times 100]$$

Cuddy Della Valle Instability Index Model

$$I = \text{CV} \cdot \sqrt{1 - \bar{R}^2}$$

Where,

I = Index

CV = Coefficient of Variation

\bar{R}^2 = Adjusted R Square

Data Analysis and Discussions

The following table depicts the value and quantity of fennel exports from India during 2000-01 to 2021-2022.

Table 1

India's Export of Fennel during 2000-01 to 2021-2022

| Year | Value (Rs. In Lakhs) | % change | Quantity (In Tonnes) | % change |
|---------|-------------------------|----------|-------------------------|----------|
| 2000-01 | 1475 | ----- | 4289 | ----- |
| 2001-02 | 1696 | 14.97 | 4374 | 1.98 |
| 2002-03 | 1784 | 5.19 | 4160 | -4.89 |
| 2003-04 | 2211 | 23.98 | 5007 | 20.36 |
| 2004-05 | 2750 | 24.34 | 7590 | 51.59 |
| 2005-06 | 2782 | 1.18 | 5725 | -24.57 |
| 2006-07 | 3580 | 28.66 | 5305 | -7.34 |
| 2007-08 | 2850 | -20.38 | 5250 | -1.04 |
| 2008-09 | 4315 | 51.40 | 8675 | 65.24 |
| 2009-10 | 5624 | 30.33 | 6800 | -21.61 |
| 2010-11 | 6588 | 17.15 | 7250 | 6.62 |

| | | | | |
|---------|-------|--------|-------|--------|
| 2011-12 | 7209 | 9.43 | 8100 | 11.72 |
| 2012-13 | 10466 | 45.18 | 13811 | 70.51 |
| 2013-14 | 16001 | 52.89 | 17300 | 25.26 |
| 2014-15 | 13166 | -17.72 | 11650 | -32.66 |
| 2015-16 | 17240 | 30.95 | 15320 | 31.50 |
| 2016-17 | 30876 | 79.10 | 35150 | 129.44 |
| 2017-18 | 25907 | -16.09 | 34550 | -1.71 |
| 2018-19 | 24412 | -5.77 | 26250 | -24.02 |
| 2019-20 | 22888 | -6.24 | 23800 | -9.33 |
| 2020-21 | 29396 | 28.43 | 33742 | 41.77 |
| 2021-22 | 41186 | 40.11 | 40136 | 18.95 |

Source: Spices Board.

From the above Table it could be understood that the value of fennel export has augmented from Rs.1475 lakhs in 2000-01 to Rs.2750 lakhs in 2004-05. Then this value decreased from Rs.3580 lakhs in 2006-07 to Rs.2850 lakhs in 2007-08. The value has tremendously accelerated to the level of Rs.5624 lakhs in 2009-10. The value of fennel export has extremely accelerated from Rs.6588 lakhs in 2010-11 to Rs. 7209 lakhs in 2011-12. Then the export has suddenly gone up to Rs.10466 lakhs in 2012-13. Then the fennel export has accelerated from Rs.17240 lakhs in the year 2015-16 to the level of Rs.30876 lakhs in 2016-17 and finally it reached to the level of Rs.41186 lakhs in 2021-2022. India's export value of fennel has registered negative growth. During years 2007-08, 2014-15, 2017-18, 2018-19 and 2019-2020 the fennel exports has registered negative growth. In the year 2016-17 the annual growth of fennel export has registered highest level of 79.10 per cent and in the year 2005-06 the growth has registered lowest level of 1.18 per cent.

The table also shows that the quantity of fennel exports has decelerated from 4289 Tonnes in 2000-01 to 4160 Tonnes in 2002-03. The quantity has decreased from 7590 Tonnes in 2004-05 to 5250 Tonnes in 2007-08. Then the quantity terrifically increased from 6800 Tonnes in 2009-10 to 8100 Tonnes in 2011-12. Then the quantity of fennel export has risen from 11650 Tonnes in 2014-15 to 35150 Tonnes in 2016-17, after that the quantity has steadily shrunken to the level of 40136 Tonnes in 2021-2022. The percentage change of the quantity of fennel export from India has registered negative growth in most of the study period. In the year 2016-17 the export of quantity of fennel export has registered the maximum annual growth level of 129.44 per cent and in the year 2001-02 it has recorded the minimum level of 1.98 per cent.

Table 2

Trend and Growth Rates of India's Export of Fennel during 2000-01 to 2021-2022

| Variables | Linear Model | | | | R ² |
|-----------|----------------|----------|-----------|----------------|----------------|
| | a | b | t | | |
| Value | -6558.468 | 1654.894 | 9.968 ** | | 0.832 |
| Quantity | -3686.779 | 1602.147 | 8.009 ** | | 0.762 |
| Variables | Semi-log Model | | | | CGR |
| | a | b | t | R ² | |
| Value | 7.024 | 0.165 | 25.065 ** | 0.969 | 0.180 |
| Quantity | 7.996 | 0.113 | 12.596 ** | 0.888 | 0.120 |

Source: Authors own calculation.

** Significant at one per cent level

The Table clearly shows that the R² values of value of fennel export and quantity of fennel export were found to be satisfactory and 't' values were also found to be statistically significant at one per cent level. On an average the value of fennel export has increased by Rs.1654.894 lakhs per annum during the study period, whereas the quantity of fennel export has increased by 1602.147 Tonnes per annum.

The annual average growth rate of value of fennel export has risen by 16.5 per cent per year. On the other hand, the annual average growth rate of quantity of fennel export has risen by 11.3 per cent per annum during the study period. Similarly, the compound growth rate of value of fennel export was found to be higher (18 per cent per annum) than the compound growth rate of quantity of fennel export (12 per cent per annum).

Cuddy Della Valle Instability Index of value and quantity of fennel exports in India during 2000-01 to 2021-2022 is presented in Table 3.

Table 3

Cuddy Della Valle Index of Value and Quantity of Fennel Exports in India during 2000-01 to 2021-2022

| Variable | CV | Adjusted R ² | CDVI | Decision |
|--------------------|--------|-------------------------|--------|--------------------|
| Value of Fennel | 94.431 | 0.968 | 16.903 | Medium Instability |
| Quantity of Fennel | 80.852 | 0.882 | 27.813 | Medium Instability |

Source: Authors own calculation.

It is clear from table 3 that in this value and quantity of fennel exports in India during 2000-01 to 2021-2022 are showing significant growth rate with medium instability.

Conclusion

Fennel Exports value and quantity showed a positive growth rate which is attributed to the increase in production of fennel. The export value and quantity of fennel exemplified high instability. Last few years fennel exports were decreased due to economic slowdown, low rainfall, heavy competition and low price. Appropriate measures should be taken to stabilize the prices in domestic and international markets. The supply of fennel should be regulated in order to prevent fall in price. As majority of fennel growing farmers are small and marginal farmers incentives should be given to prevent them from shifting to other crops.

References

1. Abubacker, A.T.N (2011) "Export Value of Fennel", Facts for You, pp. 21-22.
2. Anju Jacob & Elsamma Job (2015) "Pepper Production and Export from India: Growth and Instability Analysis", International Journal of Current Research, Vol. 7, No. 9, pp. 20388-20391.
3. Azad Rahman, Delwar Akbar, Sanjaya Timilsina, Tienke Trotter, Michael Thomson and Surya Bhattarai (2020) "Market Analysis of Fennel Seed", Research with impact, pp. 1-15.
4. Jaya Prapakaran. P & P. Satheesh Kumar (2016) "An Analytical Study on Growth and Structure of Coir Exports of India", Roots International Journal of Multidisciplinary Researches, Vol. 2, No. 3, pp. 105-109.
5. Jaya Prapakaran. P & P. Satheesh Kumar (2021) "A Study on Chilli Exports of India", Journal on Indian History & Culture, Vol. 36, No. 8(II), pp. 112-115.
6. Malhotra, S.K (2012) "Fennel and fennel seed", Handbook of herbs and spices, Ed. Peter, K.V., Woodhead Publishing Limited, Cambridge, UK, pp. 275-302.
7. Maria Sophiya. P & P. Satheesh Kumar (2019) "Commodity Exports of India", An International Multidisciplinary Quarterly Research Journal (AJANTA), Vol. VIII, Issue. I, pp. 130-134.
8. Mathanraj. T and P. Jaya Prapakaran (2020) "India's External Trade in the Post Liberalization Period", Studies in Indian Place Names, Vol. 40, Issue. 1, pp. 724-733.
9. Satheeshkumar. P (2014) "Growth and Structure of Exports in India during 1981-2010", Published thesis.
10. Soumya, C., Burark, S.S., Sharma, L. and Jain, H.K (2014) "Growth and Instability in Production and Export of Selected Spices of India", International Journal Seed Spices, Vol. 4, No. 2, pp. 1-10.
11. Suresh. A and P. Satheesh Kumar (2017) "The Causal Relationship between Agricultural Exports and Agriculture Growth in India", Bodhi International Journal of Research in Humanities, Arts and Science, Vol. 1, Issue. 3, pp. 28-33