

Role And Significance Of Spices In Indian Economy: An Empirical Study

Zolianzuali*, K. Vanrammawia

Government Aizawl College, Aizawl, Mizoram, India

ABSTRACT

India is usually referred as 'spice bowl of the world' owing to the cultivation of 75 varieties of spices out of 109 shortlisted by International Organization for Standardization(ISO) and it is also for her production of different variety and superior quality spices India has highest number of spice varieties in the world (Ralte and Ekhe,2022;Anantha and Sidana,2019).India produces more than 100 Lakh MT of spices, of which, about 15.78 Lakh MT (15%) is exported to more than 180 countries. Despite the COVID Pandemic, spices export from India continued its upward trend during 2020-21, attaining an all-time high of US \$ 4.0 billion mark for the first time in the history of spices export. During 2021-22, the export of spices/spice products from India was 15,31,154 tons valued `30,576 crore (4102.29 million US\$) (Ministry of Commerce and Industry, Government of India, Spice Board, India,2023).

Keywords: Spices, India's economy, production, significance, export.

INTRODUCTION

Horticulture occupies a very important place in India and horticultural crops play a unique role in India's economy. India, with diverse soil and climate comprising several agro-ecological regions provide ample opportunity to grow a variety of horticulture crops. These crops contributed a significant part of total agricultural produce in the country comprising of fruits, vegetables, root and tuber crops, flowers, ornamental plants, medicinal and aromatic plants, spices, condiments, plantation crops and mushroom. Cultivation of these crops is labour intensive thus, generating a lot of employment opportunities for the rural population. (Datta,2013).

India is the seventh largest country in the world with a total geographical area of 328.73 M ha and has second largest population of 121 crores (2011), after China. Around 60 percent of the total population depends on agriculture and allied activities.

India is a predominant player in global spices trade. It is the major producer, consumer and exporter of spices in the world. Out of the 109 different spices listed by International Organisation for standardization (ISO), 75 different varieties of spices are grown in India because of varied agro-climatic

conditions and soil types. India produces more than 100 Lakh MT of spices, of which, about 15.78 Lakh MT (15%) is exported to more than 180 countries. Despite the COVID Pandemic, spices export from India continued its upward trend during 2020-21, attaining an all-time high of US \$ 4.0 billion mark for the first time in the history of spices export. During 2021-22, the export of spices/spice products from India was 15,31,154 tons valued `30,576 crore (4102.29 million US\$) (Ministry of Commerce and Industry, Government of India, Spice Board, India,2023).

Production of Spices in India:

Indian spices have a global presence with a considerable share in the world market. Indian spices are valued globally, for their exquisite aroma, texture, taste and medicinal value. The varying climatic conditions in India provide ample scope for the cultivation of a variety of spices. Almost all Indian states produce spices, with the total area under spice cultivation being 3.21 million hectares with the passage of time, the Indian spices have evolved and matured as a technology based, quality-conscious, customer-centric and market-driven industry. India is the world's largest producer, consumer and exporter of spices and the country produces about 75 of the 109

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

varieties listed by the International Organization for standardization (ISO) and also accounts for half of the global trading in spices. (Spice Board of India,2014).

Spices	2011-2012		2021-22(ADV.EST)	
	Production	Share in Prod.	Production	Share in Production
Pepper	43,000	0.706	60,000	0.556
Cardamom (Small)	15,000	0.246	23,340	0.216
Cardamom (Large)	3,860	0.063	8,812	0.081
Chilli	14,48,215	23.781	18,66,108	17.304
Ginger(fresh)	9,24,417	15.180	21,20,643	19.665
Turmeric(dry)	13,98,862	22.291	13,30,932	12.349
Coriander	4,28,687	7.039	8,00,742	7.425
Cumin	4,62,645	7.597	7,25,651	6.728
Celery	5,271	0.065	6,103	0.056
Fennel	1,44,112	2.266	1,37,280	1.272
Fenugreek	1,21,775	1.989	2,48,203	2.301
Garlic	8,98,438	14.743	32,77,428	30.391
Tamarind	1,82,089	2.990	1,62,038	1.502
Clove	1,035	0.169	1,335	0.012
Nutmeg	12,138	0.195	15,384	0.142
Grand total	60,89,544	100.00	1,07,83,999	100.00

Table1: PRODUCTION OF SPICES IN INDIA (Production in Tons)

Source: State Agri/Horti Departments/DASD Kozhikkode

Table 1 shows the production of spices in India for 2011-12 and 2021-22. The highest share of spices production for the year 2011-12 is chilli with a percentage of 23.781, next is dry turmeric with a percentage of 22.291 and third highest is ginger(fresh) with 15.180 percent. For the year 2021-22, the highest is garlic with a share of 30.391 per cent, second is ginger (fresh) with 19.665 per cent and third is chilli with 17.304 per cent.

SPICES	2016-17		2017-18		2018-19		2019-20		2020-21	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Pepper	17,600	1,14,313	16,840	82,078	13,540	56,868	17,000	57,371	16,300	54,446
Cardamom (small)	3,850	42,150	5,680	60,908	2,850	35,625	1,850	42,537	6,500	1,10,675
Cardamom (large)	780	8,264	760	5,647	860	6,106	1,310	7090	1,325	9,126
Chilli	4,00,250	5,07,076	4,43,900	4,25,633	4,68,500	5,41,118	4,96,000	6,71,040	6,01,500	8,42,975
Ginger	24,950	25,705	22,605	21,607	18,150	19,602	60,410	52,905	1,25,700	75,665
Turmeric	1,16,500	1,24,191	1,07,300	1,03,568	1,33,600	1,41,616	1,37,650	1,28,691	1,83,000	1,67,660
Coriander	30,300	29,208	35,185	27,275	48,900	35,208	47,135	39,831	57,000	48,983
Cumin	1,19,000	1,96,320	1,43,670	2,41,799	1,80,300	2,88,480	2,14,190	3,32,806	2,99,000	4,25,310
Celery	6,250	6,246	6,480	5,950	6,100	6,649	6,230	6,904	7,650	9,984
Fennel	35,150	30,876	34,550	25,906	26,250	24,413	24,220	23,162	31,800	27,630
Fenugreek	34,680	18,277	29,280	12,689	27,150	13,847	26,570	15,690	38,300	24,642
Other seeds (1)	18,100	15,456	22,175	16,046	29,740	18,736	37,580	22,081	48,800	30,008
Garlic	32,200	30,712	46,980	30,936	29,500	17,110	22,280	17,183	17,950	15,630
Nutmeg Mace	5,070	23,642	5,500	22,094	3,300	15,015	2,900	13,280	3,875	19,000
Other Spices (2)	40,210	50,595	38,305	65,253	43,300	61,486	37,235	66,546	44,000	70,943
Curry powder/ Paste	28,500	59,910	30,150	61,620	33,850	74,470	38,370	81,279	38,450	89,145
Mint Products (3)	22,300	2,52,750	21,500	3,22,835	21,610	3,74,934	24,470	3,83,202	27,400	3,66,825
Spice Oils and Oleoresins	12,100	2,45,533	17,200	2,66,172	12,750	2,19,300	13,000	2,44,683	16,450	3,30,675

Total	9,47,79 0	17,81,22 4	10,28,06 0	17,98,0 16	11,00,250	19,50,58 1	12,08,400	22,06,28 0	15,65,00 0	27,19,320
-------	--------------	---------------	---------------	---------------	-----------	---------------	-----------	---------------	---------------	-----------

Table 2: Item-wise export of spices from India (Quantity: tonnes, Value: Rs in Lakhs)

- (1) Include Ajwan seed, Dill seed, Poppy seed, Aniseed, Mustard etc.
- (2) Include Asafoetida, Cinnamon, Cassia, Cambodege, Saffron, Vanilla, Spices(NES) etc.
- (3) Include menthol, menthol crystals and mint oils.

Source: Spices Statistics at a Glance 2021, Directorate of Arecanut and Spices Development

The export for the different spices during the year 2016 to 2020 was 58,49,500 tonnes in quantity and Rupees 1,04,55,421 lakhs in values. It can be seen from the table 2 that the three spices namely turmeric, ginger and chilli have a large share in the export of spices from India. As India is the largest producer, consumer and exporter of chilli, the table 13 depicted that during the year 2016 to 2020, 24,10,150 tonnes with a value of Rupees 29,87,842(in lakhs) were exported. In the case of turmeric 6,78,050 tonnes with a value of Rupees 6,65,726(in lakhs) were exported and for ginger 2,51,815 tonnes with a value of Rupees 1,95,484(in lakhs) were also exported.

For the year 2020-21, chilli secured first position among the spices exported with a share of 38.43%. Cumin ranked second with a share of 19.10%, followed by turmeric (11.69%). The fourth position is obtained by ginger with a share of 8.03%. Comparing the year 2016 and 2020, these spices have registered an increase, chilli(50.28% in volume,66.24% in

value), ginger(403% in volume,194.35% in value),turmeric(53.54% in volume,35% in value), cumin(151.26% in volume and 116.64% in value), cardamom(small)(68.83% in volume,162% in value), cardamom(large)(69.87% in volume,10.43% in value),coriander(88.11% in volume,67.70%),celery(22.4% in value,59.8% in value), fenugreek(10.43% in volume,34.82%), other seeds(169.61% in volume, 94.15% in value),other spices(9.42% in volume,40.21% in value), curry powder and paste(34.91% in volume and 48.79% in value), mint products(22.86% in volume,45.13% in value) and spice oils and oleoresins(35.95% in volume,34.67% in value). The following spices have shown a decrease, pepper (7.38% in volume, 52.37% in value), fennel (22.45 in volume, 59.8% in value), garlic (44.25% in volume, 49.10% in value) and nutmeg and mace (23.57% in volume,19.65% in value).

It is interesting to know that during 2020-21, the export of spices reached an all-time high both in terms of value and volume by registering a growth of 17% in value and 30% in volume. India produces about 75 of the 109 varieties listed by the International Organization for Standardization (ISO). The most produced and exported spices are pepper, cardamom, chilli, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, garlic, nutmeg & mace, curry powder, spice oils and oleoresins. Out of these spices, chilli, cumin, turmeric, ginger and coriander make up about 76% of the total production.

Country	2015-16		2016-17		2017-18		2018-19		2019-20	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
China	14,719	1,19,788	14,921	1,16,970	28,981	1,93,422	93,649	2,73,054	2,13,835	5,05,323
U.S.A	75,702	2,81,558	70,795	2,88,660	79,882	3,02,422	82,202	2,83,059	87,804	3,35,127
Bangladesh	36,340	17,737	76,764	57,615	53,154	46,709	80,027	91,018	1,41,032	1,17,703
U.A.E	69,120	76,110	73,199	81,601	77,587	88,593	65,140	83,047	80,203	1,07,833

Thailand	62,291	78,946	63,698	1,06,642	67,043	71,037	74,215	92,242	67,945	1,07,813
Sri Lanka	61,179	63,422	63,227	64,071	65,518	47,723	67,884	61,502	63,927	75,444
Malaysia	61,505	75,233	68,443	82,864	62,545	60,045	64,998	68,474	55,680	74,566
U.K	30,932	71,488	29,436	75,745	30,659	68,138	31,408	69,620	32,112	65,405
Indonesia	24,455	30,848	39,119	54,249	42,286	41,458	40,804	56,060	43,308	64,231
Germany	9,952	46,432	10,727	51,576	10,222	52,249	10,601	46,568	9,218	48,494
Total	4,46,195	8,61,562	5,10,329	9,79,993	5,17,877	9,71,796	6,10,928	11,24,644	7,95,064	15,01,939

Table 3: Major-country-wise export of spices from India 2014-15 to 2019-20 (Quantity:tonnes, Value: Rs in Lakhs)

Source: Spices Statistics at a Glance 2021, Directorate of Arecanut and Spices Development

India is one of the world's largest, consumer and exporter of spices, and it exported spices and spice products to 180 destinations worldwide in 2019-20. The top destinations among them were China, U.S.A, Bangladesh, U.A.E, Thailand, Sri Lanka, Malaysia, U.K, Indonesia and Germany. These ten destinations made up of more than 78 per cent of the total export earnings in 2019-20. As shown in the table 3 that, spices worth Rs.5,15,323 lakhs were exported to China in 2019-20 which constituted 33.64% of the overall value exported. During the same year U.S.A imported Rs 3,35,127 lakhs (21.31%), while Bangladesh imported Rs.1,17,703 lakhs (7.83%). Spices worth Rs.1,07,833 and Rs.1,07,813 were exported to U.A.E and Thailand consisting of 7.18% and 7.17%.

Objective:

To study the role and significance of spices in Indian economy

Role and significance of Spices in Indian economy:

India is usually referred as 'spice bowl of the world' owing to the cultivation of 75 varieties of spices out of 109 shortlisted by International Organization for Standardization(ISO) and it is also for her production

of different variety and superior quality spices India has highest number of spice varieties in the world (Ralte and Ekhe,2022;Anantha and Sidana,2019).This is due to the varying climatic conditions in India which provide ample scope for the cultivation of a variety of spices. Indian spices are the most sought-after globally, given their exquisite aroma, texture, flavour and medicinal value. India has the largest domestic market for the spices of the world (Palani,2019). Over the years, the Indian spice community has evolved and matured as a technology-based, quality-conscious, customer-centric, market-driven industry. With Karnataka and Kerala on the front foot, almost all Indian states produce spices, with a total area under spice cultivation being 3.21 million hectares (Spice Board of India, 2016). In financial year 2022, the area under cultivation of spices was estimated to be 4.49 million hectares across India.

According to Spices Board of India, in the year 2021-22, the country produced about 10.9 Mn MT of spices in 4.4 Mn Ha (adv. estimates) with average productivity of nearly 2.5 MT/Ha. Over the period (2010-11 to 2020-21), the production increased at a CAGR of about 7% from 5.35 Mn MT in 2010-11 to 11.04 Mn MT in 2020-21. The acreage has also

increased at a CAGR of nearly 4% from 2.9 Mn Ha in 2010-11 to 4.5 Mn Ha in 2020-21 (Spice Board of India, 2023). It is interesting to note that the glory of Indian spices prevails all over the world and that helps India holding a commanding position in the global spice trade. Indian spices can be found in abundance in the highlands, tropical rain forests, marshes, marshy woods, fertile valleys, and beautiful green plains.

India is also named as 'Home of Spices' due to the fact that, it is the largest producer, consumer and exporter of spices in the world. Spices play an important role in augmenting farmers income and also export market (Papang et al., 2016). The term 'spice and condiments' apply to natural or vegetable products or mixtures that are used in whole or crushed form mainly for the taste, aroma, for colour of food or for tempering of foods and beverages such as soups and also for medicinal properties. Spices are a natural plant product that are utilized to enhance the taste, aroma and colour of food products. Spices refer to the dried part of a plant that contains volatile oils or aromatic flavors (Salma and Ramakrishnan, 2017).

The most produced and exported spices are pepper, cardamom, chilli, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, garlic, nutmeg & mace, curry powder, spice oils and oleoresins. From the spices produced in India, chilli, cumin, turmeric, ginger and coriander make up about 76% of the total production (Spice Industry and Export in India, 2022). Nearly all the states and union territories in India cultivate at least one of the spices due to the favourable climatic conditions prevailing in all the states and union territories (Rajanbabu et al., 2022). In terms of the value of the world trade, pepper, cardamom, ginger, turmeric, chilli, cinnamon, nutmeg/mace, cloves and vanilla are the most important spices crop from tropical regions and cumin, coriander, sesame seeds, mustard, sage, bay, oregano and mint are the spices crop from the non-tropical regions (FAO, 2005). India is the largest exporter of spice and spice products. During the year 2020-21, the country exhibited an upward trend and

exported spices worth US \$4.18 billion which was a 34% increase from that of 2019-20. United States of America (USA) imports the highest quantity of spices in the world (Sharangi and Pandit, 2018) with a value of 1,701 thousand USD which contributes 16.35 per cent of world import value whereas India ranks third with a value of 596 thousand USD with a total share of only 5.73 per cent in the import value of the world (Yes Bank and IDH, 2018)

The word *spice* comes from the old French word *espice* (Dubey, 2017). Spices can be in various forms, it can be in the form of fresh, prepared, dried or broken, it can also in the form of barks, leaves, buds, roots, seeds etc. that cause the smell, flavour, taste, sharpness in the food items apart from the seasoning aspect. Spices are distinguished from herbs, which are leaves, flowers or stems from plants used for flavouring or as a garnish (Dubey, 2017). Spices can be said to be an integral to the Indian community as influences the Indian history. Spices is an important additive in all the Indian cuisines as it offers culinary value in exquisite aroma, texture and taste and spices also possess tremendous nutritive and therapeutic value (Dini, 2019; Bower et al., 2016; Srinivasan, 2014).

Spices have become very popular today not only because of its flavouring, colouring and preserving nature but also for its medicinal value. Active ingredient, anti-oxidant, functional foods, super-food are keywords in health and agriculture today (Wilson et al., 2013). According to Bagal et al., (2020), spices refer to such natural plants or vegetable products or mixtures in whole or ground form and as used for imparting flavour, aroma and pungency to and for seasoning of foods. Spices may be made up of various parts such as floral parts (clove), fruits (cardamom, chillies), berries (black pepper), seeds (cumin, coriander), rhizome (ginger, turmeric), roots (horse radish), leaves (tejpat), kernel (nutmegs), aril (mace), bark (cinnamons) and bulbs (garlic, onion) or any other part of spice plants.

Spices	2011-2012		2017- 2018		2021-22(ADV.EST)	
	Area	Prodn.	Area	Prodn.	Area	Prodn.
Pepper	2,01,381	43,000	1,39,487	64,000	2,88,118	60,000

Cardamom (Small)	71,285	15,000	69,330	20,650	69,190	23,340
Cardamom (Large)	26,460	3,860	26,617	5,906	45,039	8,812
Chilli	7,93,921	14,48,215	6,78,880	17,18,200	6,94,313	18,66,108
Ginger(fresh)	1,25,374	9,24,417	1,68,989	17,94,560	1,90,686	21,20,643
Turmeric(dry)	2,51,824	13,98,862	2,31,637	8,63,460	3,49,642	13,30,932
Coriander	3,62,148	4,28,687	5,44,240	7,21,390	6,31,698	8,00,742
Cumin	8,43,401	4,62,645	9,66,170	6,89,420	10,36,713	7,25,651
Celery	4,176	5,271	4,010	5,510	4,331	6,103
Fennel	92,446	1,44,112	65,810	1,03,830	82,224	1,37,280
Fenugreek	96,304	1,21,775	1,49,330	2,13,340	1,67,468	2,48,203
Garlic	1,71,800	8,98,438	4,09,720	31,13,740	4,01,167	32,77,428
Tamarind	52,788	1,82,089	45,340	1,75,470	44,994	1,62,038
Clove	2,100	1,035	2,210	4,290	2,210	1,335
Nutmeg	18,407	12,138	23,470	15,110	24,080	15,384
Grand total	34,12,941	60,89,544	35,25,240	95,08,876	40,31,873	1,07,83,999

Table 4: SPICE WISE AREA AND PRODUCTION (Area in Hec, Production in Tons)**Source: State Agri/Horti Departments/DASD Kozhikkode**

Spices play an important role in the economy of India as India is one of the largest producers of spices in the world. Spices production in the country grew from 67.64 lakh tonnes in 2014-15 to 106.79 lakh tonnes in 2020-21 with an annual growth rate 7.9%, following an increase in area from 32.24 lakh hectare to 45.28 lakh hectare. Among the major spices, Cumin (14.8%), Garlic (14.7%), Ginger (7.5%), Fennel (6.8%), Coriander (6.2%), fenugreek (5.8%), Red chilli (4.2%) and Turmeric (1.3 %), show significant

growth rate in production (Spices Statistics at a glance 2021). Table no.4 shows the area and production of fifteen spices for 2011-12 and 2017-18 and advanced estimates of 2021-2022 in India. The three spices namely Chilli, turmeric and ginger ranked first, second and third among the fifteen spices produced during 2011-12. For the year 2017-18 and 2021-22, the highest production is for garlic and followed by chilli, ginger and turmeric.

Spices	2012	2022	Increase (+)/ Decrease (-)
	Area	Area	
Pepper	2,01,381	2,88,118	(+)86,737

Cardamom (Small)	71,285	69,190	(-)2,095
Cardamom (Large)	26,460	45,039	(+)18,579
Chilli	7,93,921	6,94,313	(-)99,608
Ginger(fresh)	1,25,374	1,90,686	(+)65,312
Turmeric(dry)	2,51,824	3,49,642	(+)97,818
Coriander	3,62,148	6,31,698	(+)2,69,550
Cumin	8,43,401	10,36,713	(+)1,93,312
Celery	4,176	4,331	(+)155
Fennel	92,446	82,224	(-)10,222
Fenugreek	96,304	1,67,468	(+)71,164
Garlic	1,71,800	4,01,167	(+)2,29,367
Tamarind	52,788	44,994	(-)7794
Clove	2,100	2,210	(+)110
Nutmeg	18,407	24,080	(+)5,673
Grand total	34,12,941	40,31,873	

Table 5: Area of Production of Spices in India

Adapted from Source: State Agri/Horti Departments/DASD Kozhikkode

Orissa and North Eastern States are important states for spices production.

During the past years, there has been a steady increase in area production of spices in India. The annual growth rate of area of production of spices in India is estimated to be 3.6%. As shown in the table 5, the total area under spices cultivation is 34.12 lakhs hectare in 2012 and 40.31 lakhs hectare in 2022 that is an increase of 6.19 percent. Madhya Pradesh, Telangana, Andhra Pradesh, Kerala, Karnataka, Tamil Nadu,

Among the fifteen popular spices cultivated in India, an increase in the area of production can be seen from the eleven spices viz; coriander, garlic, cumin, turmeric(dry), pepper, fenugreek, ginger(fresh), cardamom(large), nutmeg, celery and clove. Coriander spice has registered the biggest increase with a large margin of 2,69,550 hectares followed by garlic with an increase of 2,29,367 hectares.

STATES	2019 - 20		2020 – 21		2021 – 22(F)		2022 – 23(*)	
	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod.
Madhya Pradesh	6,66,705	30,75,980	7,24,777	33,72,216	7,32,667	35,38,199	7,40,375	35,94,787
Rajasthan	10,20,350	10,58,915	9,66,888	11,83,714	8,15,849	10,45,937	8,75,816	11,17,360

Gujarat	6,99,060	10,09,930	7,42,164	11,13,843	5,83,502	10,18,120	6,20,008	10,00,102
Karnataka	3,18,040	5,80,226	4,05,451	9,10,870	4,27,180	9,61,799	3,94,536	8,98,800
Telangana	1,42,390	8,53,095	1,36,453	8,93,675	1,96,106	9,16,297	1,96,154	8,36,197
Andhra Pradesh	2,00,130	8,96,180	2,17,061	8,85,679	2,60,163	5,12,313	2,66,259	7,20,236
Maharashtra	76,335	3,88,040	83,581	4,33,058	1,30,207	5,89,891	1,06,759	4,65,517
Orissa	1,48,195	2,97,260	1,48,196	2,97,260	1,52,446	4,18,704	1,55,174	4,39,535
Assam	1,04,613	3,31,009	1,03,217	3,38,539	1,00,135	3,17,238	1,00,807	3,16,110
Uttar Pradesh	3,86,030	2,64,575	4,04,917	2,66,968	4,30,548	3,19,693	4,03,518	2,77,650
West Bengal	61,226	2,53,312	63,942	2,60,666	64,163	2,65,574	74,355	2,75,018
Tamil Nadu	1,02,955	1,90,555	1,12,735	1,85,817	1,14,277	2,21,307	1,10,473	1,88,318
Kerala	1,63,042	1,42,670	1,59,191	1,51,426	1,52,055	1,56,447	1,61,425	1,62,866
Total	40,89,251	93,41,747	42,68,573	1,02,93,731	41,59,298	1,02,81,519	42,05,659	1,02,92,496

Table 6: Major state-wise area and production of spices in India (Area in Hectare, Production in Tons)**Source: State Agri/Horticulture Departments/DASD Kozhikkode**(*): 1st advance estimate F: FINAL

As India is the largest producer of spices in the world, spices are cultivated across the country. Table 6 shows major state-wise area and production of spices in India from the year 2019-20 to 2022-23. It can be seen that Madhya Pradesh ranked number one in the production of spices by producing 35,94,787 tons for the year 2022-23 with a share of 34.92 % from the total production. Rajasthan ranked number two with a production of 11,17,360(10.85%) followed by Gujarat having a share of 9.71%. The fourth position goes to Karnataka (8.73%) followed by the state Telangana (8.12%). Among the north-eastern states Assam could secured the ninth position with a share of 3.07%.

CONCLUSION

Spices have become very popular today not only because of its flavouring, colouring and preserving nature but also for its medicinal value. Active ingredient, anti-oxidant, functional foods, super-food are keywords in health and agriculture today (Wilson et al.,2013). It is interesting to note that the glory of Indian spices prevails all over the world and that helps India holding a commanding position in the global spice trade. Indian spices can be found in abundance in the highlands, tropical rain forests, marshes, marshy woods, fertile valleys, and beautiful green plains. Nearly all the states and union territories in India cultivate at least one of the spices due to the favourable climatic conditions prevailing in all the states and union territories (Rajanbabu et al.,2022).

Therefore, it can be concluded that spices play a tremendous role in the economy of India.

REFERENCES

1. Bagal,N.U, Kshirsagar.P.J,Torane,S.R and Manerikar.S.S(2020) Export of spices from India:An instability analysis, International Research Journal of Agricultural Economics and Statistics, Vol 11, Issue 1,55-63.
2. Jeetendra Kumar Soni, Vishambhar Dayal, Lalramhlmi.B., Sunil Kumar Sunani, Sunil Doley and Mishra.V.K., GINGER AND TURMERIC PRODUCTION IMPROVED TECHNOLOGIES, Daya Publishing House® A Division of Astral International Pvt. Ltd. New Delhi,2023.
3. Palani.S., (2019) An Analysis of Spices Export in India, Science, Technology and Development, Volume VIII Issue VIII.
4. Rohlupuii Ralte and Bernice Ekhe(2022). Major spices of North Eastern Hill Region of India:A review, The Pharma Innovation Journal,11(10),437-445.
5. Sonal Dubey (2017) Indian Spices and their medicinal value, Indian Journal of Pharmaceutical and Research, Vol.51, Issue.
6. Spices Statistics at a Glance 2021, Directorate of Arecanut and Spices Development
7. State Agri/Horti Departments/DASD Kozhikkode
8. Utkarsh Ghate, hema Kulkarni and Arunachalam.A(2019), Spices in the eastern Indian laterite soil have more polphenols, Indian Journal of Hill Farming, Vol.32, Issue 2, 236-238.
9. Venkata Prasad Babu Anantha and Bajinder Kaur Sidana (2019) Growth Performance of Indian Spice Trade, Journal of Agricultural Development and Policy, Volume 29, No.1,88-95.
10. Venkata Prasad Babu Anantha and Bajinder Kaur Sidana (2019) Growth Performance of Indian Spice Trade, Journal of Agricultural Development and Policy, Volume 29, No.1,88-95.
11. Yes, Bank IDH. Business cases for spice production and processing in Meghalaya, Mizoram, Nagaland and Uttarakhand at <https://www.idhsustainabletrade.com/uploaded/2018/05/Spice-report.pdf> accessed on 2023,15th February.
12. <https://www.indianspices.com/> accessed on 2023,15th February.
13. <https://www.ibef.org/exports/spice-industry-india> accessed on 2023,25th February.
14. <https://indiantradeportal.in/vs.jsp?lang=0&id=0,31,24100,24119> accessed on 2023,18th March.

HOW TO CITE: Zolanzuali*, K. Vanrammawia, Role And Significance Of Spices In Indian Economy: An Empirical Study, *Int. J. Sci. R. Tech.*, 2026, 3 (9), 826-835. <https://doi.org/10.5281/zenodo.23121171>