

Significance of Indian Spices in Mizoram: A Study on Select Spices

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Abstract: 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 Organization for Standardization (ISO), 75 different varieties of spices are grown in India because of varied agro-climatic conditions and soil types. The geo-climatic situation of Mizoram offers an excellent scope for growing different horticulture crops including fruits, vegetables, spices, plantation crops, medicinal and aromatic plants of high economic value (Department of Horticulture, Govt. of Mizoram). In the back drop it is important to understand the significance and importance of bird's eye chilli, ginger and turmeric having a share of 56.92 percent in the production of spices and contributing Rs 4, 592.78 crores to the export earnings in the year. (Spice of Board, 2014-15)

Keywords: Spices, production, economy, turmeric, ginger, chilli

1. Introduction

Mizoram falls under the Eastern Himalayan Zone, according to the demarcation of 15 agro-climatic regions in India. Mizoram enjoys a tropical and sub-tropical climate where most of the horticultural crops flourish. Of the total 21 lakh hectare of land in the state, about 4.40 lakh hectare are suitable for horticulture. The climate in the state is suitable for the cultivation of spices like ginger, turmeric, chilli, pepper, cinnamon, large cardamom and citronella. At present ginger, turmeric and chillies are commonly cultivated in Mizoram. According to the Spice Board of India, Mizoram has congenial grounds for commercial cultivation of spices retaining their unique generic properties.

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).

Mizoram has emerged an important producer of turmeric, ginger and bird's eye chilli in India. For the year 2021-22, Mizoram ranked high in production of the three spices amongst the states of India in spite of being a small state in terms of population and area. Mizoram ranked 10th amongst the highest producers of turmeric in India with a total production of 29, 570 tons and a share of 2.52 percent in the total production of turmeric in India. In the production of ginger, Mizoram ranked 11th with a total production of 60, 830 tons and a share of 2.74 percent in the total production of ginger in India. In the production of chilli, Mizoram ranked 13th with a total production of 10, 920 tons and a share of 0.58 per cent.

Horticulture Department was bifurcated from Agriculture Department temporarily in the year 1993 and became a full-fledged Department on 2.9.1997. Despite its young existence, the contribution and achievement of the Department towards horticulture development in the state of Mizoram has been tremendous. From the geographical area 21, 087 sq. kms., the horticulture potential area is 11.56 lakhs Ha. At present, the total area under Horticulture crops is 1.10 lakh Ha.

In view of the large share in the production of these spices in the national level (56.92 percent) and an overwhelming share (99.91 percent) share in the production of turmeric, ginger and birds eye chilli in Mizoram, there is a need to study the significance of these spices with the help of a secondary data.

Bird's eye chilli, ginger and turmeric are vastly grown in Mizoram with a total production of 65, 660 metric tons in the year 2014-15 (Govt. of Mizoram, 2015). This is attributed to the congenial geo climatic conditions prevalent in this remote hilly state of India. Spices play an important role in the growth of horticulture in the state

Production of Spices in Mizoram:

The Indian Council of Agricultural Research, New Delhi, India funded for the spice improvement in Mizoram was started on February, 2009 through ICAR-AICRP. Spices play an important role in the economic stability of the rural households in Mizoram; the initiation of this Centre helps in scaling up spice production. Major spices like ginger, turmeric and bird's eye chilli produced from Mizoram are unique in their characteristics. Mizoram acquired Geographical Indication (GI) Tag for 'Mizo Ginger' and 'Bird's eye chilli' which creates more market opportunities to farmers due to their uniqueness and qualities (Soni et al., 2022).

Spices like ginger, turmeric, black pepper and bird's eye chillies are grown in large areas of land estimated around 2, 2470 ha with total production of major spices of 59, 620 MT. Among the spices crop cultivated, turmeric being a

short gestation crop, is an ideal crop for the poor farmers. Ginger is cultivated in many parts of Mizoram and has been a good source of income for farmers because of its pungency and longevity. The ginger variety thingpui and thinglaidum has received Geographical Indication (GI) tag in 2021. Mizo Chilli that is bird's eye chilli received Geographical Indication (GI) tag in 2015, which is small in size and very pungent (Directorate of Agriculture, Govt. of Mizoram).

Total horticulture production in Mizoram was 687.36 thousand metric tons as per advance estimates 2021-22. In the financial year 2020, the state produced 344.91 thousand tons of fruits under an area of 63.77 thousand hectares. Similarly, 101.49 thousand tons of spices were produced in the state under an area of 28.22 thousand hectares in the financial year 2020 (Ministry of Commerce and Industry, Govt. of India).

Table 1: Production of Turmeric, Ginger and Bird's eye chilli in Mizoram for the years 2011-2021

Sl. No	Year	Turmeric		Ginger		Bird's eye chilli	
		Area (Ha)	Production (MT)	Area (Ha)	Production (MT)	Area (Ha)	Production (MT)
1	2011-12	5,580	29,240	7,010	34,460	8,900	9,790
2	2012-13	6,050	22,990	7,280	28,390	9,025	8,210
3	2013-14	6,250	24,700	7,480	29,920	9,040	9,100
4	2014-15	6,350	25,130	7,650	31,200	9,140	9,330
5	2015-16	5,950	24,730	7,340	30,790	9,140	9,330
6	2016-17	7,480	28,890	8,550	62,740	11,170	10,730
7	2017-18	7,738	29,823	8,553	62,743	11,195	10,918
8	2018-19	7,738	29,823	8,553	60,131	11,196	10,918
9	2019-20	7,738	29,823	8,553	60,131	11,196	10,198
10	2020-21	7,738	29,823	8,553	60,131	11,196	10,918

Source: Mizoram Statistical Abstract (2021), Directorate of Economics & Statistics, Govt. of Mizoram.

Table 1 shows the area and production of turmeric, ginger and bird's eye chilli for the last ten years that is from 2011 to 2020. It can be seen that as the area of cultivation increases, production also increases. The area and production of the three spices is more or less the same from the year 2017 to 2020. The highest production can be seen for the three years viz 2017-18, 2018-19 and 2020-21 with a production of 10,918 metric tons. The production of bird's eye chilli for the year 2011-12 was 9,790 metric tons, while in 2020-21 it was 10,918 metric tons registering an increase of 10.33 percent.

Table 2: Production of spices in Mizoram for the year 2014-15

Spices	Area In 1000 ha	Production In 1000 mt	Share in production (%)
Ginger	7.65	31.20	47.473
Turmeric	6.35	25.13	38.237
Chillies (Dried)	9.14	9.33	14.196
Coriander	0.06	0.02	.0304
Black pepper	0.070	0.0025	.004
Cinnamon	0.001	0.00025	.0004
Garlic	0.02	0.012	.018
Celery	0.001	0.003	.0042
Others	0.07	0.024	.037
Total	23.362	65.72175	100.00

Source: Annual Report (2015), Directorate of Horticulture, Govt of Mizoram.

From table 2 it can be seen that ginger, turmeric and chilli have a share of 99.906 per cent of the total production of spices in Mizoram for the year 2014-15. The spices coriander, black pepper, cinnamon, garlic, celery and others have a share of just 0.094 per cent.

Table 3: District-Wise Production of Spices in Mizoram for 2021-22

Districts	Black Pepper		Chilli (Dried)		Ginger		Turmeric		Garlic	
	Area (Ha)	Prod. (MT)	Area (Ha)	Prod. (MT)	Area (Ha)	Prod. (MT)	Area (Ha)	Prod. (MT)	Area (Ha)	Prod. (MT)
Mamit	-	-	689.1	1,291.2	663.6	9,069.8	800	8,460	-	-
Kolasib	45	1	1,344	1000	1,406.47	9,123.6	300	432	-	-
Aizawl	25	2	2,217.85	2,245.9	1,446.5	8,995.8	1,125	2,858	6.4	3.6
Champhai	-	-	1,474	1,586	1,321.5	7,890.8	1,064.4	2,144.4	6.4	3.6
Serchhip	-	-	1,700	1,282	1,565.5	8,441.8	1,280	3,920	2.4	1.27
Lunglei	-	-	1,902	1,597	834.5	5,617.1	1,295	293	3.4	2.17
Lawngtlai	-	-	1,194	963	687.5	5,596.8	341	2,149	.4	.77
Siaha	-	-	674.8	953	627.5	5,394.8	1,533	3,042	3.8	1
Saitual	-	-	-	-	-	-	-	-	-	-
Khawzawl	-	-	-	-	-	-	-	-	-	-
Hnahthial	-	-	-	-	-	-	-	-	-	-
Total	70	3	11,196	10,918	8,553	60,131	7,738	29,823	22.8	12.41

(-) Data not available

Source – Directorate of Horticulture, Govt. Of Mizoram

Table 3 show the production of different spices viz black pepper, chilli (dried), ginger, turmeric and garlic by the eleven districts of Mizoram for the year 2021-22.

Table 4: District-Wise Production of Turmeric, Ginger and Bird's Eye Chilli in Mizoram for 2020-21

Districts	Turmeric		Ginger		Bird's Eye Chilli	
	Area (Ha)	Prod. (MT)	Area (Ha)	Prod. (MT)	Area (Ha)	Prod. (MT)
Mamit	800	8, 460	664	9, 070	689	1, 291
Kolasib	300	4, 320	1, 406	9, 124	1, 344	1, 000
Aizawl	1, 125	2, 858	1, 447	8, 996	2, 218	2, 246
Champhai	1, 064	2, 144	1, 321	7, 891	1, 474	1, 586
Serchhip	1, 280	3, 920	1, 565	8, 442	1, 700	1, 282
Lunglei	1, 295	2, 930	835	5, 617	1, 902	1, 597
Lawngtlai	341	2, 149	687	5, 596	1, 194	963
Siaha	1, 533	3, 042	628	5, 395	675	953
Saitual	-	-	-	-	-	-
Khawzawl	-	-	-	-	-	-
Hnahthial	-	-	-	-	-	-
Total	7, 738	29, 823	8, 553	60, 131	11, 196	10, 918

(-) Data not available

Source – Directorate of Horticulture

In Mizoram, there are eleven districts namely, Mamit, kolasib, Aizawl, Champhai, Serchhip, Lunglei, Lawngtlai, Siaha, Saitual, Khawzawl and Hnahthial. Table 4 shows the production of turmeric, ginger and bird's eye chilli in the eleventh districts of Mizoram for the year 2020-21. The highest production for turmeric is Mamit district, for ginger it is Kolasib district and for bird's eye chilli it is Aizawl district.

2. Objective

To study the significance of select spices namely turmeric, ginger and bird's eye chilli in Mizoram

Role and significance of Spices in economy of Mizoram

The economy of Mizoram is primarily based on agriculture and shifting cultivation is still the dominant mode of agriculture in the state. According to the 2011 census, around 60 per cent of principal workers are employed in agriculture and allied sectors of the economy (Mizoram Economic Survey, 2021-22). Mizoram has geographical area of 21, 087 sq. kms. out of which the Horticulture potential area is 11.56 lakhs Ha. At present, the total area under Horticulture crops is 1.10 lakh Ha. The geo-climatic situation of Mizoram offers an excellent scope for growing different Horticulture crops including fruits, vegetables, spices, plantation crops, medicinal and aromatic plants of high economic value. Of the many spice crops, ginger, turmeric and birds eye chilli are the major spice crops of Mizoram (Department of Horticulture, Govt. of Mizoram).

Spices like ginger, turmeric, black pepper and bird's eye chillies are grown in large areas of land estimated around 2, 2470 ha with total production of major spices of 59, 620 MT. Among the spices crop cultivated, turmeric being a short gestation crop, is an ideal crop for the poor farmers. Ginger is cultivated in many parts of Mizoram and has been a good source of income for farmers because of its pungency and longevity. The ginger variety thingpui and thinglaidum has received Geographical Indication (GI) tag in 2021. Mizo Chilli that is bird's eye chilli received Geographical Indication (GI) tag in 2015, which is small in size and very pungent (Directorate of Agriculture, Govt. of Mizoram).

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3. Conclusion

It is interesting to note that, the rich diversity of agro-climatic conditions, topographical variations and altitudinal differences offer good scope for horticulture activities in Mizoram. The Government of Mizoram has given optimum effort to not only achieving self-sufficiency in fruit, vegetable, flowers, spices and plantation crops in Mizoram but also building commercial scale production for identified horticulture crops with a mission to enhancement in production, marketing and processing of Horticulture produces for increasing income and employment. Mizoram accounts for about 13.2% of the total fruits produced in the Northeast. Spices contribute about 13% to the horticulture basket with the key contributors being Ginger, Turmeric and Chili (YES BANK Ltd., IDH India, 2018).

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