

An Overview of Ginger Sector in Nepal

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Abstract

A review of various data published by government and non-government sector were accessed to find the trend as well as challenges and opportunity of the ginger sector. The secondary data shows that there was increased trend in area (4.2 times) and production (5.6 times) in these two decades with an annual increment by +7.24% in area and +9.02% in production respectively. It consumes high cost of cultivation and gives good net profit compared to vegetable crops though it has less benefit-cost ratio (1.72) compared to vegetable crops. Majority of ginger area is covered by locally saved variety in the country. Two released and recommended varieties in cultivation are Kapurkot-1 and Kapurkot-2. NTIS-2016 identified ginger sector as one of potential export sectors under agro and forest products as it has considerable contribution on the national foreign trade and employing the rural people. There is great opportunity to increase productivity, expand export potential, diversify the ginger products and employ women and disadvantaged groups.

Keywords: Ginger, spices, kapurkot-1, kapurkot-2, profitability

Introduction

Ginger is obtained from the rhizomes of *Zingiber officinale* ($2n=2x=22$). The ginger family is a tropical group, especially abundant in Indo-Malaysian region, consisting of more than 1200 plant species in 53 genera. It is one of the most important spices in the world and has been in use for more than 5000 years ago by the ancient Chinese and Indians. It is being cultivated in Nepal for both as fresh vegetable and as a dried spice, since time memorable. Ginger is a high value crop (HVC) in Nepal, the most important spices produced and exported out of the country. It covers the highest cultivated area and production by volume among the spice crops, and export value next to cardamom in Nepal. It's

estimated that 1.2 million people (4.3% of total Nepalese population) grow ginger all over the Nepal, especially in the eastern and poor western region (Lex van Boeckel, 2017). This sector in Nepal employs around 400,000 farmers in ginger cultivation of which 40% people produce on less than 0.5 hectares and is cultivated in 69 districts spread around the country (ILO, 2019). According to FAOSTAT (FAO, 2018), India is a leading producer of ginger in the world with the area 172.03 thousand hectares producing 893.24 thousand tons. Nepal ranks fourth position in the global ranking with an area (23000 ha) and production (284000t). Japan (27.24t/ha) followed by Fiji (25.05 t/ha), Indonesia (20.34t/ha) and Thailand (16.64t/ha) are the leading countries in ginger productivity.

Methodology

Ginger sector is the important crop for generating rural employment and importing the foreign currency to national economy. So, it is important to access its economic values for the country. This review study involved gathering of qualitative and quantitative information related to ginger production, price, value and import-export in the country, analyze them and come with constructive suggestions. The government annual, periodic reports and agricultural statistical documents and also the reports from various private as well as I/NGO sector have been reviewed.

Some of the calculation done in this study are given as follows;

1. Annual productivity;

$$\text{Productivity } \left(\frac{T}{ha}\right) = \frac{\text{Annual Total Production (tonnes)}}{\text{yearly total cultivated area (Hectare)}}$$

2. Annual change in area and production is calculated as;

$$\text{Annual change in area (\%)} = \frac{\text{current year data} - \text{previous year data}}{\text{previous year data}} \times 100$$

3. The share % of particular data is calculated as;

$$\text{Share \% (data A)} = \frac{\text{data value of A}}{\text{data value of sum of total number of data of series A}} \times 100$$

4. The costs and profit are calculated as;

- a. Total cost of cultivation (Rs) = total variable costs (rs) + total fixed costs (rs)

- b. Gross profit (Rs) = total production quantity (Kg) × Sales price (Rs)

- c. Net profit (Rs) = Sales income (Rs) – total (variable cost + fixed cost)

- d. Benefit cost ratio = $\frac{\text{gross profit (Rs)}}{\text{total cost of cultivation (Rs)}}$

- e. Cost per Kg = $\frac{\text{total cost of cultivation (Rs)}}{\text{total quantity of production (Kg)}}$

Results and Discussion

Production

Nepal produces 297.5 thousand tons of ginger from 22.1 thousand hectares of land with an average productivity 13.44 t/ha (MoALD, 2020). There is increasing trend of ginger both in area and production in the country. There is 4.2 times increase in coverage and 5.6 times increase in the production from 5.32 thousand to 22.1 thousand hectares producing 52.73 thousand tons to 297.5 thousand tons from

1994/95 to 2018/19 with an annual average change in area by +7.24% and in production by +9.02% respectively (MoAD, 2013; MoALD, 2020). The details are given in Table 1.

Table 1: Area, production, productivity and their average annual change

Year	Area (ha)	Production (t)	Productivity (t/ha)	Change in area (%)	Change in production (%)
1994/95	5321	52730	9.91		
1995/96	6238	63292	10.15	+17.23%	+20.03%
1996/97	7051	66950	9.50	+13.03%	+5.78%
1997/98	8821	81601	9.25	+25.10%	+21.88%
1998/99	8841	81799	9.25	+0.23%	+0.24%
1999/00	8314	74994	9.02	-5.96%	-8.32%
2000/01	8956	84366	9.42	+7.72%	+12.50%
2001/02	9189	87909	9.57	+2.60%	+4.20%
2002/03	11480	140056	12.20	+24.93%	+59.32%
2003/04	11830	150593	12.73	+3.05%	+7.52%
2004/05	11930	152704	12.80	+0.85%	+1.40%
2005/06	18515	232992	12.58	+55.20%	+52.58%
2006/07	13170	160576	12.19	-28.87%	-31.08%
2007/08	14007	161171	11.51	+6.36%	+0.37%
2008/09	17665	211251	11.96	+26.12%	+31.07%
2009/10	18042	210790	11.68	+2.13%	-0.22%
2010/11	19081	216289	11.34	+5.76%	+2.61%
2011/12	20256	255208	12.60	+6.16%	+17.99%
2012/13	19376	235033	12.13	-4.34%	-7.91%
2013/14	24226	276150	11.40	+25.03%	+17.49%
2014/15	23826	242547	10.18	-1.65%	-12.17%
2015/16	21869	271863	12.43	-8.21%	+12.09%
2016/17	22,649	279,504	12.34	+3.57%	+2.81%
2017/18	23000	284000	12.35	+1.55%	+1.61%
2018/19	22,132	297512	13.44	-3.77%	+4.76%
	Average Change (25 year)			+7.24%	+9.02%

Source: (MoAD, 2013; MoALD, 2020)

Table 2: Distribution of major ginger production districts and their national share (2018/19)

District	Area (ha)	Share (%)	Production(t)	Share (%)	Productivity (t/ha)
Ilam	3233	16.69	45994	19.57	14.23
Salyan	2000	10.32	25006	10.64	12.50
Palpa	1260	6.50	14853	6.32	11.79
Nawalparasi	1310	6.76	13362	5.69	10.20
Kaski	1636	8.44	13055	5.55	7.99
Morang	1295	6.68	11610	4.94	8.96
Panchthar	759	3.92	11479	4.88	15.12
Doti	708	3.65	10266	4.37	14.50
Kailali	500	2.58	10000	4.25	20.00
Sindhuli	671	3.46	8334	3.55	12.42
Ten districts total	13372	60.42	163959	55.11	12.26
Nepal	22132	100.00	297512	100.00	13.45

Source: (MoALD, 2020)

The province wise share of ginger production is given in Table 3. The data shows that province 1 has the highest area (7882 ha) under ginger cultivation producing 111604 tons, shares 35.6% of national production followed by Karnali province, shares 15.2% and Bagmati province shares 13.6% in production. Province 1, Karnali and Bagmati provinces are the top three gingerproducing provinces. The Sudurpashchim province has the highest productivity (16.66 t/ha) followed by Karnali province (14.55 t/ha) and Province 1 (14.16 t/ha), as top three provinces which are higher than the national average productivity (13.44 t/ha).

Table 3: Area, production, productivity of ginger and their share by province (2018/19)

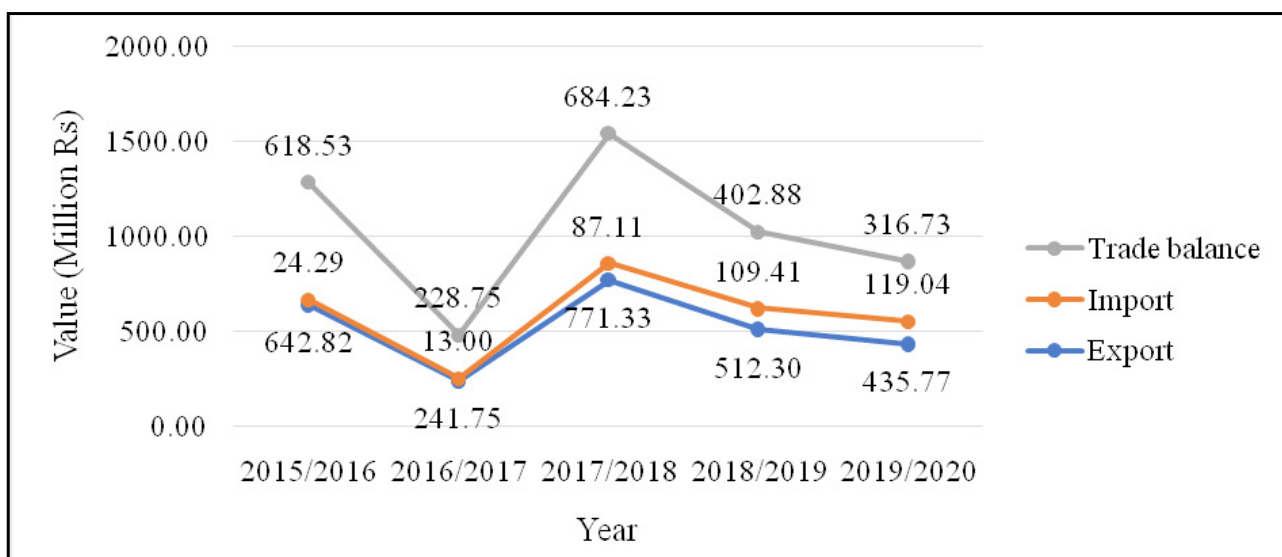
Province	Area (ha)	Share (%)	Production (t)	Share (%)	Productivity (t/ha)
Province 1	7882	35.61%	111604	37.51%	14.16
Province 2	451	2.04%	4905	1.65%	10.88
Bagmati Province	3221	14.55%	40536	13.62%	12.58
Gandaki Province	3038	13.73%	34644	11.64%	11.40
Lumbini Province	2799	12.65%	33408	11.23%	11.94
Karnali Province	3111	14.06%	45274	15.22%	14.55
Sudurpashchim Province	1629	7.36%	27141	9.12%	16.66
Nepal Total	22132	100.00%	297512	100.00%	13.44

Source: (MoALD, 2020)

Export-import situation

Ginger (HS Code 091010) is being recognized by Nepal Trade Integration Strategy (NTIS) 2016 as one of the priority export potential sectors under agro- and forest products (MoC, 2016). Agriculture Development Strategy (ADS), has also given due priority to promote spice crops (MoAD, 2016). Nepal exports mostly fresh ginger in raw form. The place of major export and import country is India which accounted 99% of total export (8759.8 thousand tons) of value Rs. 400.22 million in 2019/20. During 2019/20, total export accounts 7656.84 thousand tons of fresh ginger (87%), 808.86 thousand tons of dried ginger (sutho) (9%)

and 381.49 thousand tons of dried and ground ginger (4%) of worth total Rs. 435.78 million. The import accounts total of 658.03 thousand tons which worth Rs. 119.01 million (DoC, 2020). The export and import trend of ginger from Nepal during past five years is given in Figure 1. The total foreign trade done by ginger sector from Nepal is decreased in the last three years if we look upon the figure. There is decrease in the total export and increase in the import value in these three years may be due to less increase in the production of ginger in the country in the last five years given in Table 1. The figure shows positive foreign trade balance of ginger trade for the subsequent past five years.



Source: (DoC, 2020)

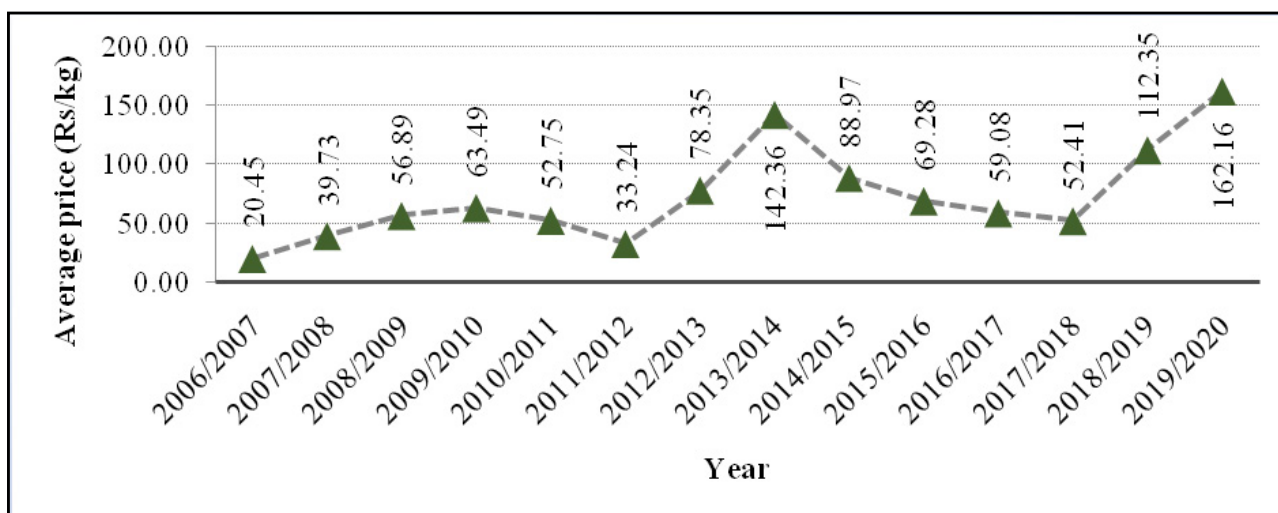
Fig. 1: Export import trend of ginger in Nepal (2015/16 to 2019/20)

Price

The 15 years data (from 2006/07 to 2019/2020) of price of fresh ginger at the Kalimati Fruit and Vegetable wholesale market in Kathmandu which is the largest wholesale market in the country was analyzed and the detail is given in the annex 1 (KFVMD, 2020). The price of ginger seems to be fluctuated in these decade. However, the price of ginger increased from Rs. 20.45 per kilogram (2006/07) to Rs. 162.1 per kilogram (2019/20). The current whole sale price of ginger increased by 690% compared to 2006/07. The trend of price of ginger in the Kalimati Fruit and Vegetable wholesale market

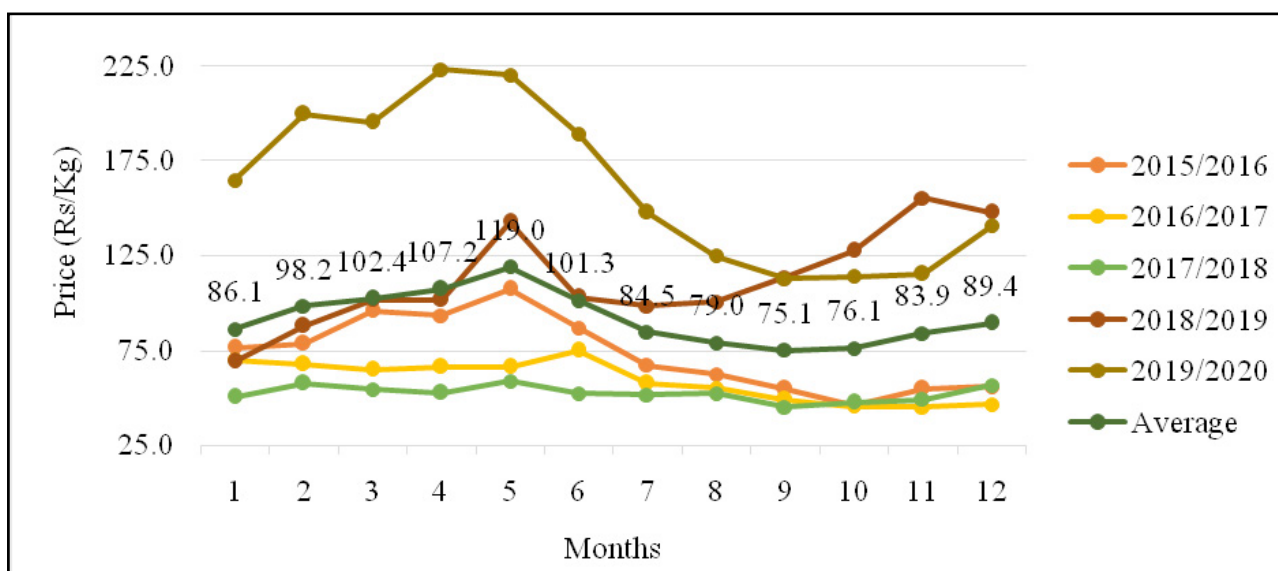
is shown in Figure 2.

The seasonal fluctuation of five years average price of fresh ginger at Kalimati wholesale market is presented in Figure 3. The figure shows that the price falls gradually during Ashwin to Magh and becomes minimum during Margsir to Magh which is harvesting time in Nepal. The price starts to rise gradually from Chaitra to Bhadra month and goes on pick during Shrawan and Bhadra is the lean period of ginger. These trends clearly show that there should be some storage facility of produced ginger for the year-round supply including in the lean period of ginger and get good income by the involved farm families.



Source:(KFVMD, 2020)

Fig. 2: Trend of price of ginger at Kalimati fruit and vegetable wholesale market, from 2006/7 to 2019/20



Note: 1-12 means Nepali months namely; Baisakh, Jesth, Asadh, Shrawan, Bhadau, Ashwin, Kartik, Margsir, Push, Magh, Fagun, Chaitra respectively. Source:(KFVMD, 2020)

Fig.3: Seasonal price of ginger by months (Rs/kg) at Kalimati fruit and vegetable wholesale market, from 2015/16 to 2019/20

Profitability

In Nepal, ginger cultivation is mostly conducted in traditional ways with very few external inputs. The major factors in production include-input costs, labor costs, and land preparation costs. Transport costs are incorporated in production costs because farmers usually have to transport their produce to road-heads. Production costs vary depending upon regions and places of ginger farms. The survey data of value chain

report of ginger subsector done during 2010 shows that cost for the production of a Kg of ginger is Rs. 18.00 in Mid-western Development Region of the country (HVAP, 2011). Major cost for ginger cultivation was consumed by the seed 46% and by labour cost 35% of total cost, which need very high initial investment created by high risk to the involved growers. While, a study conducted by Market Research and Statistical Management Program in 2013/2014(APMDD, 2014), shows the average cost of production

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Management Program in 2013/2014 (APMDD, 2014), shows the average cost of production per Kg is calculated to be Rs. 30.61 mid-hills of Nepal.

A comparative table for profitability comparison of various sub-sectors is summarized in Table 4. The table shows that ginger consumes higher cost of cultivation followed by potato, cauliflower and tomato and has good net benefit compared to tomato, onion, chili and other crops. The data shows that the ginger farming requires very high cultivation costs though it gives the highest net return. It has low benefit cost ratio 1.72, slightly higher than maize. These results show the risk of ginger farming as it consumes very high cost while it is in the field which cause great loss upon occurrence of any natural disaster and pest attack compared to vegetables like onion, tomato, chili and cauliflower.

Table 4: Per hectare cost and profitability comparison of different cash crops

Crop	Total cost (Rs)	Gross income farm gate (Rs)	Farmgate return (Rs)	Net return (Rs)	Cost per kg(Rs)	Benefit/cost ratio
Ginger	647133.35	1114473.50	467340.16	465227.08	30.62	1.72
Tomato	132942.34	481013.30	348070.96	394165.50	6.53	3.62
Onion	100877.33	469789.65	368912.33	377037.54	3.79	4.66
Chili	134079.36	418802.51	284723.15	363136.32	6.08	3.12
Cauliflower	137076.99	367961.73	230884.75	267146.83	9.38	2.68
Potato	235703.75	446025.96	210322.21	222559.95	11.89	1.89
Maize	59117.83	68011.74	8893.91	7711.10	14.23	1.15

Varieties

Area specific cultivars of ginger are under cultivation in Nepal. There are two types of ginger varieties i.e. Nashe (which is rich in fiber) and Boshe (which has very few fiber), based on the presence of fiber. The yield and quality of Boshe variety is considered better than Nashe varieties and also fetches higher prices. Nashe varieties, due to its high fiber contents are preferred as an ingredient of mixed spices

by spice industry for producing ginger powder. Source: (APMDD, 2014)
The fiber content of ginger is dependent on the type of soil and climatic conditions; therefore, Boshe varieties from one location when grown to other location can produce Nasherhizomes. Kapukot-1 and Kapukot-2 are the only varieties recommended for cultivation in 2001 and 2006 (AITC, 2019) which are claimed to have less fiber and high productivity (Gautam and Acharya, 2074 BS). The characteristics of these

varieties is summarized in Table5. Other promising lines of ginger selected from the different part of the country are ZI 8506, ZI 8503 and ZI 8504 for production are under evaluation at Ginger Research Program, Salyanof National Agriculture Research Council. Some area specific varieties found in eastern part of Nepal are; Bhaise, Aunle and Nangre.

Table5: Varietal characteristics of released two varieties of ginger in Nepal

Kapukot-1	Kapukot-2
Characteristics of Kapurkot-1 cultivar of ginger are as under:	Characteristics of Kapurkot-2 cultivar of ginger are as under:
<ul style="list-style-type: none"> <input type="checkbox"/> Recommended area for cultivation: Inner Terai and Mid-hills (up to 1600 msl) <input type="checkbox"/> Crop period: 225-240 days <input type="checkbox"/> Production capacity: 22.8-38.5 metric tons per hectare fresh ginger <input type="checkbox"/> Rhizome production per plant: 400-540 grams <input type="checkbox"/> Recovery percentage upon drying: 18% <input type="checkbox"/> Aromatic oil: 2.16% <input type="checkbox"/> Oleoresin: 7.12% <input type="checkbox"/> Fiber content: below 4% <input type="checkbox"/> Other character: tolerant to rhizome rot and leaf spot diseases. 	<ul style="list-style-type: none"> <input type="checkbox"/> Recommended area for cultivation: Inner Terai and Mid-hills (up to 1600 msl) <input type="checkbox"/> Crop period: 240-260 days <input type="checkbox"/> Production capacity: 32.75-40.2 metric tons per hectare fresh ginger <input type="checkbox"/> Rhizome production per plant: 400-450 grams <input type="checkbox"/> Recovery percentage upon drying: 14.4-20.9% <input type="checkbox"/> Aromatic oil: 2.5% <input type="checkbox"/> Oleoresin: 7.05% <input type="checkbox"/> Fiber content: below 4.0% <input type="checkbox"/> Other character: tolerant to rhizome rot and consistent in production.

Source: (Gautam and Acharya, 2074 BS)

SWOT analysis of Ginger Sector

Ginger sector have considerable contribution towards the national foreign trade balance and in the generation of domestic employment of rural population in the country. This crop is being recognized by National Trade Integration Strategy (NTIS). The SWOT analysis done by Government of Nepal, Ministry of commerce in NTIS 2016 is presented in Table 6.

Table 6: SWOT Analysis of ginger sector done by NTIS 2016 (MoC, 2016)

Strengths	Weakness
<ul style="list-style-type: none"> <input type="checkbox"/> Significant source of income and employment for small farming families <input type="checkbox"/> Fourth largest producer of ginger in the world <input type="checkbox"/> Possibility of inter-cropping with other agriculture crops <input type="checkbox"/> Favourable geo-climatic conditions <input type="checkbox"/> Nepalese ginger regarded as high quality in world market 	<ul style="list-style-type: none"> <input type="checkbox"/> Inadequate quality seeds <input type="checkbox"/> High crop loss due to diseases <input type="checkbox"/> Limited storage and processing facilities <input type="checkbox"/> Lack of internationally accredited laboratories with sufficient test parameters <input type="checkbox"/> Limited skilled human resources

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Opportunities	Threats
<ul style="list-style-type: none"> ❑ Increasing global demand ❑ Potentiality of higher productivity and area expansion ❑ Due to richness in oil and oleoresin, high potential for value addition ❑ Rising demand in Ayurvedic medicines and other uses 	<ul style="list-style-type: none"> ❑ Incidence and control of disease- pest (Rhizome rot, rhizome fly) ❑ High price fluctuation ❑ Cheap and quality ginger being produced in neighbouring countries may result in loss of market share

Conclusion and Suggestions

Ginger is one of the most important spices grown in Nepal with the highest area and production. It has considerable export potential which is recognized by NTIS 2016. This sector is generating considerable employment opportunity all over the country. Government and private sectors have to pay attention to identify the technology suitable for higher production including varietal and resistant research to take opportunity to produce good quality ginger in larger economic scale by decreasing the variable costs and get enhanced income. Proper market linkages and logistic support including storage and post-production facility could play strategic role for the sustainability of the sector.

Based on the information reviewed, it is advisable to under take some points for the sustainability of ginger sector;

- ❖ Improving storage capacity of seed as well as table ginger for adequate seed supply and year round availability of fresh ginger,
- ❖ Find some way to minimize the cost of farming per unit through mechanization and increasing the scale of farm,
- ❖ More efficient technical package for the ginger root rot management should be developed and available technology need to be transferred to the growers,
- ❖ Diversify the product for the sustainability of production and improve production and post-production input (irrigation, fertilizer, plant protection and post-harvest) facility

to the farmers on time in adequate quantity and quality,

- ❖ Collective marketing should be followed by the farmers for bargaining of their ginger, and,
- ❖ Line ministry has to make dialogue with neighbouring government to settle non-terror hurdles in the boarder market for export.

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Annex 1: Trend of price of ginger by months at Kalimatifruit and vegetable wholesale market, Kalimati, Kathmandu

Year	Months												Average	Remarks
	1	2	3	4	5	6	7	8	9	10	11	12		
2006/2007	26.1	21.1	23.3	22.8	24.4	20.1	19.3	19.8	17.3	15.5	15.5	17.1	20.2	14 April 2019 to 12 April 2020
2007/2008	20.0	24.8	28.8	32.0	39.2	29.7	28.6	30.0	29.0	30.3	38.8	43.1	31.2	14 April 2018 to 13 April 2019
2008/2009	54.2	62.7	59.5	61.3	75.1	43.2	46.8	42.1	39.2	47.7	47.1	58.3	53.1	14 April 2017 to 13 April 2018
2009/2010	72.6	75.3	74.0	70.9	65.8	56.1	46.8	46.0	42.7	45.4	52.2	69.5	59.8	13 April 2016 to 12 April 2017
2010/2011	80.4	104.5	81.5	80.0	66.1	53.0	48.3	46.9	48.1	45.9	45.6	47.3	62.3	14 April 2015 to 12 April 2016
2011/2012	49.4	52.6	49.9	45.8	49.7	45.1	29.8	27.2	25.0	23.9	24.0	22.0	37.0	14 April 2014 to 13 April 2015
2012/2013	23.1	35.6	47.5	44.5	47.6	36.8	48.0	58.2	52.7	59.8	63.7	97.0	51.2	14 April 2014 to 13 April 2015
2013/2014	128.0	155.2	148.6	167.3	147.0	112.7	117.0	104.7	102.4	119.1	120.1	163.6	132.1	13 April 2013 to 12 April 2014
2014/2015	186.5	195.9	172.2	147.4	134.1	101.6	80.1	73.0	59.3	64.0	72.3	85.2	114.3	14 April 2012 to 12 April 2013
2015/2016	76.3	78.6	95.9	93.3	107.4	86.9	67.2	62.4	54.7	46.0	54.9	55.8	73.3	14 April 2011 to 13 April 2012
2016/2017	70.1	67.7	65.0	66.2	66.4	75.0	57.6	55.1	49.0	45.4	45.1	46.5	59.1	14 April 2010 to 13 April 2011
2017/2018	50.4	57.6	54.6	52.5	58.9	52.5	51.7	52.3	45.1	47.6	49.2	56.5	52.4	13 April 2009 to 12 April 2010
2018/2019	69.0	87.9	101.6	101.4	142.5	103.1	98.5	100.4	113.6	127.4	155.1	147.7	112.4	14 April 2008 to 12 April 2009
2019/2020	164.7	199.4	195.1	222.8	219.8	189.0	147.7	124.8	112.9	114.0	115.2	140.6	162.2	14 April 2007 to 13 April 2008
Average	86.1	98.2	102.4	107.2	119.0	101.3	84.5	79.0	75.1	76.1	83.9	89.4	72.9	

Note: number placed within the month means; 1=Baisakh (April 15-May 14), 2= Jestha (May15-June14), 3= Asadh (June 15-July14), 4=Shrawan (July 15-August 14), 5= Bhadau (August 15-September 14), 6= Ashwin (September 15-October 14), 7= Kartik (October 15-November14), 8= Margsir (November 15- December 14), 9= Push (December 15-January 14), 10= Magh (January 15-February 14), 11= Falgun (February 15-March 14), 12= Chaitra (March 15-April 14).

Source:(KFVMD, 2020)

Annex 1: Trend of price of ginger by months at Kalimatifruit and vegetable wholesale market, Kalimati, Kathmandu

Year	Months												Average	Remarks
	1	2	3	4	5	6	7	8	9	10	11	12		
2006/2007	26.1	21.1	23.3	22.8	24.4	20.1	19.3	19.8	17.3	15.5	15.5	17.1	20.2	14 April 2019 to 12 April 2020
2007/2008	20.0	24.8	28.8	32.0	39.2	29.7	28.6	30.0	29.0	30.3	38.8	43.1	31.2	14 April 2018 to 13 April 2019
2008/2009	54.2	62.7	59.5	61.3	75.1	43.2	46.8	42.1	39.2	47.7	47.1	58.3	53.1	14 April 2017 to 13 April 2018
2009/2010	72.6	75.3	74.0	70.9	65.8	56.1	46.8	46.0	42.7	45.4	52.2	69.5	59.8	13 April 2016 to 12 April 2017
2010/2011	80.4	104.5	81.5	80.0	66.1	53.0	48.3	46.9	48.1	45.9	45.6	47.3	62.3	14 April 2015 to 12 April 2016
2011/2012	49.4	52.6	49.9	45.8	49.7	45.1	29.8	27.2	25.0	23.9	24.0	22.0	37.0	14 April 2014 to 13 April 2015
2012/2013	23.1	35.6	47.5	44.5	47.6	36.8	48.0	58.2	52.7	59.8	63.7	97.0	51.2	14 April 2014 to 13 April 2015
2013/2014	128.0	155.2	148.6	167.3	147.0	112.7	117.0	104.7	102.4	119.1	120.1	163.6	132.1	13 April 2013 to 12 April 2014
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2016/2017	70.1	67.7	65.0	66.2	66.4	75.0	57.6	55.1	49.0	45.4	45.1	46.5	59.1	14 April 2010 to 13 April 2011
2017/2018	50.4	57.6	54.6	52.5	58.9	52.5	51.7	52.3	45.1	47.6	49.2	56.5	52.4	13 April 2009 to 12 April 2010
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2019/2020	164.7	199.4	195.1	222.8	219.8	189.0	147.7	124.8	112.9	114.0	115.2	140.6	162.2	14 April 2007 to 13 April 2008
Average	86.1	98.2	102.4	107.2	119.0	101.3	84.5	79.0	75.1	76.1	83.9	89.4	72.9	

Note: number placed within the month means; 1=Baisakh (April 15-May 14), 2= Jestha (May15-June14), 3= Asadh (June 15-July14), 4=Shrawan (July 15-August 14), 5= Bhadau (August 15-September 14), 6= Ashwin (September 15-October 14), 7= Kartik (October 15-November14), 8= Mangsir (November 15- December 14), 9= Push (December 15-January 14), 10= Magh (January 15-February 14), 11= Falgun (February 15-March 14), 12= Chaitra (March 15-April 14).

Source:(KFVMD, 2020)

Annex 2: Export and import of ginger by type and partner country during 2019/20

Type of Ginger	Country	Quantity (000T)	% share by quantity	Value (000 Rs)	% share by value
A. Export					
Fresh Ginger nither crushed nor ground (09101110)	India	7655.49	86.53%	233525.11	53.59%
Other Ginger crushed or ground (09101200)	India	323.76	3.66%	44767.36	10.27%
Other Ginger crushed or ground (sutho) (09101190)	India	780.58	8.82%	121928.41	27.98%
India Total		8759.83	99.02%	400220.88	91.84%
Other Ginger crushed or ground (sutho) (09101190)	Bangladesh	26.00	0.29%	1329.30	0.31%
Fresh Ginger nither crushed nor ground (09101110)	China	0.25	0.00%	275.00	0.06%
Other Ginger crushed or ground (09101200)	Germany	57.48	0.65%	32989.43	7.57%
Fresh Ginger nither crushed nor ground (09101110)	Japan	1.10	0.01%	702.06	0.16%
Other Ginger crushed or ground (sutho) (09101190)	Pakistan	2.28	0.03%	260.92	0.06%
Total export		8846.93	100.00%	435777.58	100.00%
B. Import					
Fresh Ginger nither crushed nor ground (09101110)	India	342.62	52.07%	22119.61	18.58%
Other Ginger crushed or ground (09101200)	India	100.96	15.34%	24133.55	20.27%
Other Ginger crushed or ground (sutho) (09101190)	India	203.83	30.98%	70819.87	59.49%
India Total		647.41	98.39%	117073.02	98.35%
Fresh Ginger nither crushed nor ground (09101110)	China	0.12	0.02%	10.34	0.01%
Other Ginger crushed or ground (09101200)	China	10.50	1.60%	1957.23	1.64%
Total import		658.03	100.00%	119040.59	100.00%

Source: (DoC, 2020)

Annex 3: Area and production of spices and their share in total spice grown Nepal (2018/19)

Spices	Area (000ha)	Production (000t)	Area Share (%)	Production Share (%)
1. Ginger	22.1	297.5	31%	55%
2. Turmeric	10.2	98.9	14%	18%
3. Garlic	10.1	71.9	14%	13%
4. Chili	10.7	67.2	15%	12%
5. Large Cardamom	18.3	8.0	26%	1%
Total	71.4	543.4		

Source: MoALD (2020)