Export of Fruits and Vegetables from India :
Growth, Opportunities and Challenges

AAU
कृणवन्तो राष्ट्रं कृषिसंपन्नम्

Anand Agricultural University
Anand- 388 110 (Gujarat)

Department of Agricultural Economics and WTO Cell

B. A. College of Agriculture
Anand Agricultural University, Anand (Gujarat)

The Department of Agricultural Economics is an integral part of B. A. College of Agriculture, Anand Agricultural University, Anand established in 1947. The prime mandate of the department is to impart education in the field of Agricultural economics coupled with research and extension activities. Accordingly, the department imparts teaching to undergraduate as well as post graduate level. Different courses related to agricultural economics are taught in B. A. College of Agriculture, College of Agriculture, Vaso, College of Agricultural Information Technology, Anand and Institute of Distance Education, Anand. The department has 5 research schemes under which various research studies are conducted. Among these, studies on cost of cultivation of major crops are conducted on regular basis whereas socio-economic problems related studies as well as agricultural marketing and finance related studies are also conducted on need base. The findings of these studies are highly useful to farmers, policy makers and agri-entrepreneurs. WTO Cell is functioning at this department since 2009 under which various training programmes related to agri-exports are organised for farmers and other stack holders on regular basis. Seminars and workshops are also organised in context to WTO. The department regularly participates in various extension activities like Krushi Mahotsav and farmers training programmes organised by other departments.

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: Authors :

V. K. Gondalia

Rachana Bansal

K. S. Jadav

A. S. Shaikh

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Authors : Dr. V. K. Gondalia, Prof. Rachana Bansal
Dr. K. S. Jadav and Dr. A. S. Shaikh
Department of Agricultural Economics and WTO Cell
B. A. College of Agriculture
Anand Agricultural University
Anand- 388 110
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Tel-Fax: 02692-263600
Email : dr@aau.in

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Vijay Rupani

Chief Minister, Gujarat State

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MESSAGE

In India, agriculture is treated and viewed as a culture, rather than a mode of earning or an economy. The emotional attachment can be seen in our respect shown to land as Mother, Farmer as the Father of the world who feeds us all.

The Government has identified horticultural crops as a means of diversification for making agriculture more profitable by efficient soil management through **'Soil Health Card'** scheme, efficient land and water use though 'Per Drop More Crop' scheme and creating skilled employment for rural messes. Recent efforts have been rewarding in terms of opening new vista for farmers' welfare through e-NAM & e-Kisan Mandi portal and easing export of value added horticultural products.

As we move away from an economy of scarcity to an economy of plenty, there is a call for knowing the present status as well as future scope of horticulture sector. For strategic planning and exploitation of vast opportunities, timely availability of reliable data is a fundamental requirement. In view of this, for the **Anand Agricultural University** has taken the initiative to publish all the information related to export of fruits and vegetables in the form of a book, which is a laudable effort.

I congratulate the Vice Chancellor and the team for the publication. I am sure; it will be very much useful to administrators, policymakers, agri-entrepreneurs researchers and farmers.

(Vijay Rupani)

To
Dr. N. C. Patel, *Vice Chancellor*
Anand Agricultural University
Anand-388 110.
Email: vc@aau.in; ncpatel@aau.in

CHIMANBHAI SAPARIYA

सत्यमेव जयते

No. Agriculture, Energy Message -J
Minister,
Agriculture, Energy,
Government of Gujarat,
1st Floor, Swarnim Sankul-1,
Gandhinagar-382010.
Phone No.: 23250211, 23250212
Fax No. : 23250215,
Date : / /20

24 APR 2017

MESSAGE

Gujarat is one of the leading states in our country for production of fruits and vegetables. The state is very well-known for production of mango, banana, pomegranate, sapota, citrus, papaya, date palm and many vegetables. Government of Gujarat has established separate Department of Horticulture to promote the cultivation of horticultural crops. Moreover, the Government has also declared many schemes to attract the farmers for cultivation of fruit and vegetable crops. As a result, the production of fruits and vegetables attained its peak level. Now the State is in a position to export the fruits, vegetables and its value added products to many other countries.

There is an urgent need to compile the information on export potentiality of major fruit and vegetable crops, leading States of India having good production potentiality, market related issues, export and import procedures and certifications required for export of agricultural produce. The scientists of Anand Agricultural University have prepared a document entitled "Export of fruits and vegetables from India: Growth, Opportunities and Challenges". I congratulate the group of scientists for their sincere efforts for compilation of the data and preparation of the book. I hope the informative document will definitely provide guidelines to the exporters, policy makers and progressive farmers those who are interested for exporting fruits and vegetables.

I compliment the Vice Chancellor and the scientists for bringing out this publication. I am sure, it will be useful to the farmers.

(Chimanbhai D. Sapariya)

Resi.: Minister Bungalow No 5, Sector-20, Gandhinagar. Ph : 59660, 61, 23232453

શુભેચ્છા

No.-MOS/Agri. & U.H.D./VIP/ /20
Minister of State,
Agri. & Urban Housing
Swarnim Sankul-2, 2nd Floor, Sardar Patel Bhavan, Sachivalaya, Gandhinagar-382 010.
T. No. : (079) 232 50231 to 34
Fax No. : (079) 232 50235

V. V. Vaghasiya

सत्यमेव जयते

Date: 25/04/2017

:: Message ::

India having diverse ecological situation is known for producing varieties of fruit and vegetable crops. The country has good potentiality of producing different kinds of fruits and vegetables. However, the contribution of India at world level, in exporting fruits and vegetables is nearly 1 percent only. This can be enhanced by strengthening appropriate facilities for export and creating awareness among the people. For export of fruits and vegetables from India, it needs to maintain certain standards specified by different countries. The information on rules–regulations, constraints faced while exporting the materials and certifications required for export is highly essential.

Now-a-days, the export of fruits and vegetables from India and especially from Gujarat is gaining importance. In context to this, the scientists working under WTO cell of Anand Agricultural University have prepared a book 'Export of fruits and vegetables from India: Growth, Opportunities and challenges' and narrated certain guidelines for export of agricultural produces. I complement the Vice Chancellor for encouraging the scientists for preparation of the book. I convey my deep appreciation to the authors of the book for compilation of details for export and import of fruits and vegetables from India. I am sure that the information provided in the book will serve as guideline to the people associated with the export-import business, especially agricultural produces.

વી. વી. વઘાસિયા

(V. V. Vaghasiya)

Dr. N. C. Patel

Vice Chancellor
Anand Agricultural University
Anand-388110

MESSAGE

The phenomenon of globalization has changed the scenerio. Export is now a dynamic function of GDP. Higher the exports, stronger are the boosts to the growth. Agriculture is a backbone of Indian economy and it also has a crucial role to play in Indian export.

Fruits and vegetables is one of the most important and fast growing sub-sectors of Indian agriculture which forms an indispensable part of healthy diet. India ranks second in fruits and vegetables production in the world, after China, even though our share in global trade of fruits and vegetables is negligible and not up to our potential.

Recently, the export of fruits and vegetables from India is slowly gaining pace. This has occurred due to concurrent developments in the areas of cold chain infrastructure, increase in productivity and quality through research, modern post-harvest technologies, favourable government policies and various initiatives taken by APEDA.

This book focusing on several aspects of fruits and vegetables export is very timely as India is now being perceived by the world as an ideal food basket particularly for fruits and vegetables. We need to evolve new strategies which will catapult India into the big league of global exporting regions. I hope that this book will certainly help our farmers, agri-entrepreneurs and policy makers at state and national level to enhance our exports.

I appreciate the authors for their sincere efforts, hard work and contribution in bringing out this book. I am sure, it will be useful to all concerned.

NPatel

(N. C. Patel)

Dr. K. B. Kathiria

Director of Research and
Dean PG Studies
Anand Agricultural University
Anand-388110

FOREWORD

India's diverse climate ensures availability of all varieties of fresh fruits and vegetables. It produces nearly 15 and 11 per cent of the world's fruits and vegetables, respectively. It is the largest producer of many fruits and vegetables in the world. Due to the vast production base and ever increasing global demand of fruits and vegetables, India has tremendous opportunities for export.

It is fact that though our export of fruits and vegetables has considerably increased during last decade, we are facing a set of problems which are hurdles in further growth of this sector. This book is an attempt to focus on such key issues. It is based on research studies conducted by Department of Agricultural Economics & WTO Cell and International Agri-Business Management Institute of our University, which provides information about growth, opportunities and challenges in export of fruits and vegetables from India. Recent trends and emerging export markets for each major fruits and vegetables have also been highlighted by the authors.

I take this opportunity to congratulate all the authors who are also scientists of this University for their sincere efforts in conducting research and bringing out this publication and hope that farmers, scientists and policy makers as well as those in agri-business will find the book a very useful reference to enhance the agricultural export of our country.

(K. B. Kathiria)

Dr. K. P. Patel

Principal and Dean (Agri.)
B.A. College of Agriculture
Anand Agricultural University
Anand-388110

PREFACE

Export plays a key role in enhancing economic growth. Almost all countries wish to enlarge their market share in global trade for sustainable economic development. In export endeavours, the focus is always on exporting manufactured products, even though opportunities exist for exporting numerous value added agricultural products.

Farmers are always attracted by the huge domestic demand and there is always a gap between demand and supply. This makes export of agricultural produce unattractive. Secondly even if venturesome farmers dare to export they are confused about the right choice of market, quality requirement by the overseas buyers, burdensome product approvals, packing requirements and preparation of e xport documents.

The various studies related to agricultural exports have found that India and particularly Gujarat has immense potential to transform agricultural commodities into exportable goods through value addition.

I congratulate all the authors for their sincere efforts in conducting research and preparing this book. This book would provide an opportunity to exporters, researchers, academicians and others for receiving information on export opportunities in fruits and vegetables. I am sure the book will encourage Indian farmers, students of agriculture and agri-preneurs in exporting farm produce in a big way.

(K. P. Patel)

Acknowledgment.....

This book is partially based on the results of research studies conducted under WTO Cell, Department of Agricultural Economics, B.A. College of Agriculture and International Agri-Business Management Institute, Anand Agricultural University, Anand.

The purpose of this book is to provide information about the growth and present scenario in exports of fruits and vegetables from India and also to acquaint readers about opportunities and challenges lying in this field. Secondly, farmers and others who are interested in export of fruits and vegetables are not fully aware about the general norms and procedure of export. Therefore, such information have also been included in this book. We hope that this book will be helpful to readers in planning and making them successful in agri-export business.

We thank Dr. N. C. Patel, Vice Chancellor, Anand Agricultural University for giving us an opportunity to prepare a book on export opportunities in fruits and vegetables. We record our profound appreciation of the keen interest and strenuous efforts put in by Dr. K. B. Kathiria, Director of Research and Dean PG Studies, Anand Agricultural University, Anand, in bringing out this book promptly.

Our sincere thanks are also due to Dr. K. P. Patel, Principal and Dean, B. A. College of Agriculture, Anand Agricultural University, for his constant motivation to contribute for placing the state in foreign trade in the country. This publication would not have been possible without the consorted efforts of Dr. Y. C. Zala, Principal & Dean, IABMI, Dr. R. S. Pundir, Professor, Dr. M. R. Prajapati, Asst. Professor, Dr. Ritambhara Singh, Asst. Professor, IABMI and Shri Jignesh Macwan, SRF, Department of Agricultural Economics, BACA, AAU, Anand.

Finally, we thank the referees for reviewing our script and providing valuable comments and suggestions. Any and all errors & omissions are the sole responsibility of the authors.

\- V. K. Gondalia
Rachana Bansal
K. S. Jadav
A. S. Shaikh

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List of Abbreviations

APEDA	Agricultural and Processed Food Products Export Development Authority
B/L	Bill of Lading
CAGR/CGR	Compound Annual Growth Rate
DGCIS	Directorate General of Commercial Intelligence and Statistics
DGFT	Directorate General Foreign Trade
ECGC	Export Credit Guarantee Corporation of India Ltd.
EPC	Export Promotion Council
EXIM	Export Import
FIEO	Federation of Indian Export Organizations
Fig	Figure
g	Gram
GoG	Government of Gujarat
GoI	Government of India
ICAR	Indian Council of Agricultural Research
IEC	Importer-Exporter Code
Incl	Including
INCOTERMS	International Commercial Terms
ITC	International Trade Centre
ITC (HS) Code	Indian Trade Classification (Harmonised System) Code
kg	Kilogram
LC	Letter of Credit
MSAMB	Maharashtra State Agricultural Marketing Board
MT	Metric Ton
NABARD	National Bank for Agriculture and Rural Development
NHB	National Horticulture Board
qty	Quantity
RCMC	Registration Cum Membership Certificate
SPS	Sanitary and Phytosanitary
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
USD	US Dollar
WTO	World Trade Organization

Chapter 1

Introduction

Export is a vehicle of growth and development. They help not only in procuring the latest machinery, equipment and technology but also the goods and services, which are not available indigenously. Therefore, it occupies a very prominent place in the list of priorities of the economic set up of developing countries because they contribute largely to foreign exchange pool. Export plays a crucial role in the economy of the country. In order to maintain healthy balance of trade and foreign exchange reserve, it is necessary to have a sustained and high rate of growth of export.

A product that is sold to the global market is an export, and a product that is bought from the global market is an import. Import allows us to access global products and services at competitive price. It makes possible to access global technology for up-gradation of indigenous production technology, better education, better health and better transport services that otherwise may not have been available to us. This ultimately leads to a better life.

Whereas, export allows us to expand our markets at global level. It allows countries to use their resources - whether labour, technology or capital - more efficiently. Because countries are endowed with different assets and natural resources (land, labor, capital and technology), some countries may produce the same good more efficiently and therefore sell it more cheaply than other countries. If a country cannot efficiently produce an item, it can obtain the item by trading with another country that can. This is known as specialization in international trade.

International trade not only results in increased efficiency but also allows countries to participate in a global economy which raise employment levels and increases the income of individuals and nation as a whole. This leads to stimulating economic growth.

1.1 Global Scenario

According to International Trade Centre, world's total international trade was 37706 Billion USD during the year 2013-14 in which European Union ranked first with 4485 Billion USD followed by China (4201 Billion USD) and USA (3944 Billion USD). India stood at 12th position with 851 Billion USD (Table 1.1).

Table 1.1 World's largest countries by total international trade (2013-14)

Rank	Country	Billion USD
-	**World**	37,706
-	European Union	4,485
1	China	4,201
2	United States	3,944
3	Germany	2,866
4	Japan	1,522
5	France	1,212
6	United Kingdom	1,189
7	South Korea	1,171
8	Hong Kong	1,088
9	Netherlands	1,042
10	Italy	949
11	Canada	947
12	**India**	**851**
13	Russia	844
14	Singapore	825
15	Mexico	814
16	Switzerland	722
17	United Arab Emirates	676
18	Belgium	664
19	Spain	655
20	Taiwan	596

Source: ITC

India's export compared to other countries is very small. According to *The World Factbook* of the CIA (Central Intelligence Agency, USA), China ranked first with 2252 Billion USD during the year 2014 followed by European Union (2173 Million USD) and USA (1610 Billion USD). India ranked 17th position with 343 Billion USD during the year 2014 (Table 1.2).

Table 1.2 World's largest countries by exports (2014)

Rank	Country	Billion USD
1	China	2,252
—	European Union	2,173
2	United States	1,610
3	Germany	1,547
4	Japan	710
5	South Korea	628
6	France	578
7	Netherlands	553
—	Hong Kong (China)	528
8	Russia	520
9	United Kingdom	503
10	Italy	500
11	Canada	465
12	Singapore	449
13	Mexico	406
14	United Arab Emirates	405
15	Switzerland	389
16	Saudi Arabia	359
17	**India**	**343**
18	Belgium	323
—	Taiwan	318
19	Spain	317
20	Australia	251

Source: *The World Factbook* of the CIA (Central Intelligence Agency), USA

1.2 India's Export-Import Statistics

India's export as well as import has been significantly increased during the recent years. The export has been increased from Rs 3.75 lakh crore in the year 2004-05 to Rs 17.16 lakh crore in the year 2015-16. The Import also showed the similar trend. It increased from Rs. 5.01 lakh crore in the year 2004-05 to Rs 24.90 lakh crore in the year 2015-16 (Table 1.3, Fig 1.1).

India is a net importing country. We imports more than the exports resulting into negative Balance of Trade. Further, more serious concern is that the gap between export and import has widened over the years till 2012-13. During last couple of years, this gap has slightly narrowed down (Fig 1.2).

India's export continuesly increased every year from 2004-05 to 2013-14. After that it has sightly declined due to various reasons including globle ressassion and demand supply situation in importing countries. In case of imports, the increasing trend was obserwed up to 2014-15. In the year 2015-16 export and import both have declined.

The Government of India has recently introduced a new Foreign Trade Policy (FTP 2015-20). It provides a framework for increasing exports of goods and services as well as generation of employment and increasing value addition in the country, in keeping with the "Make in India" vision of Prime Minister. It also provides several insentives for promotion of our exports. The details of such insentives have been given in Appendix- III.

Table 1.3 Trends in India's export and import (Rs lakh crore)

Sr. No.	Year	Exports	Imports	Balance of Trade
1	2004-05	3.75	5.01	-1.26
2	2005-06	4.56	6.60	-2.04
3	2006-07	5.72	8.41	-2.69
4	2007-08	6.56	10.12	-3.56
5	2008-09	8.41	13.74	-5.34
6	2009-10	8.46	13.64	-5.18
7	2010-11	11.43	16.83	-5.41
8	2011-12	14.66	23.45	-8.80
9	2012-13	16.34	26.69	-10.35
10	2013-14	19.05	27.15	-8.10
11	2014-15	18.96	27.37	-8.41
12	2015-16	17.16	24.90	-7.74

Source : DGCIS, Kolkatta


Fig 1.1 Trends in India's export and import
Rs. Lakh Crore
50
45
40
35
30
25
20
15
10
5
0
Import
Export
8
6
10
7
14
8
14
8
17
11
23
15
27
16
27
19
27
19
25
17
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
Year

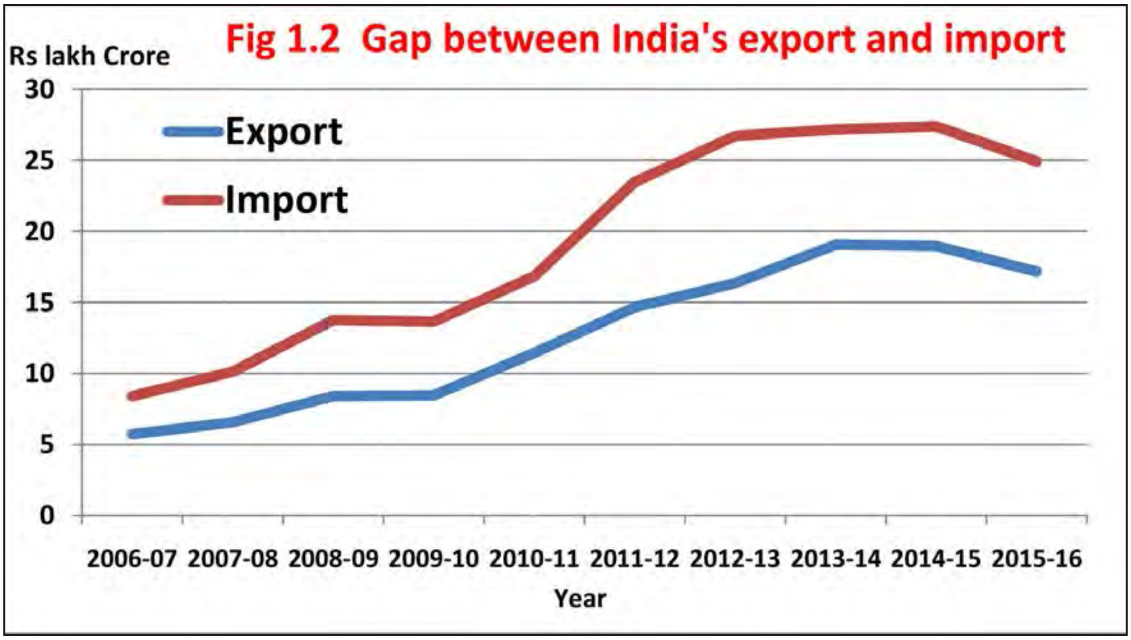


Fig 1.2 Gap between India's export and import
Rs lakh Crore
30
25
20
15
10
5
0
Export
Import
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
Year

1.3 Share of Agriculture

Agriculture is a backbone of Indian economy as it provides food to its million mouths and the raw materials to the industries. It also has a crucial role to play in Indian export. Despite being the biggest producer of many agricultural crops, India's contribution to the global agri exports is very small.

During 2013 out of global trade of 18300 billion US$, share of agriculture was 1745 billion US$ representing 9.5%. Major agri trade players during this period were US, Germany, The Netherlands, France and Brazil (APEDA, 2014).

From India's perspective, our total exports during 2015-16 stood at Rs 17.15 lakh crore out of which agri exports comprised 2.10 lakh crore representing 12.26% of the total exports (Table 1.4). There is a significant increase in the exports of agro products from the country. According to APEDA, agricultural export has been increased from Rs 0.85 lakh crore in the year 2009-10 to Rs 2.10 lakh crore in the year 2015-16 with 16.48% CAGR. During this period, the CAGR of total export of our country was 12.16%. It indicates that the agricultural export recorded a higher compound growth rate in export as compared to total export.

Table 1.4 India's total export and share of agriculture

(Rs in lakh crore)

Year	Total Export	Agricultural Export	% to Total
2009-10	8.46	0.85	10.00
2010-11	11.37	1.11	9.75
2011-12	14.66	1.80	12.28
2012-13	16.34	2.24	13.71
2013-14	19.05	2.60	13.63
2014-15	18.96	2.36	12.47
2015-16	17.15	2.10	12.26
CAGR	**12.16 %**	**16.48 %**	

Source: DGCIS, Kolkatta


Fig 1.3 India's total export
Rs. Lakh Crore
20
18
16
14
12
10
8
6
4
2
0
8
11
15
16
19
19
17
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
Year
CGR (%)=12.16*

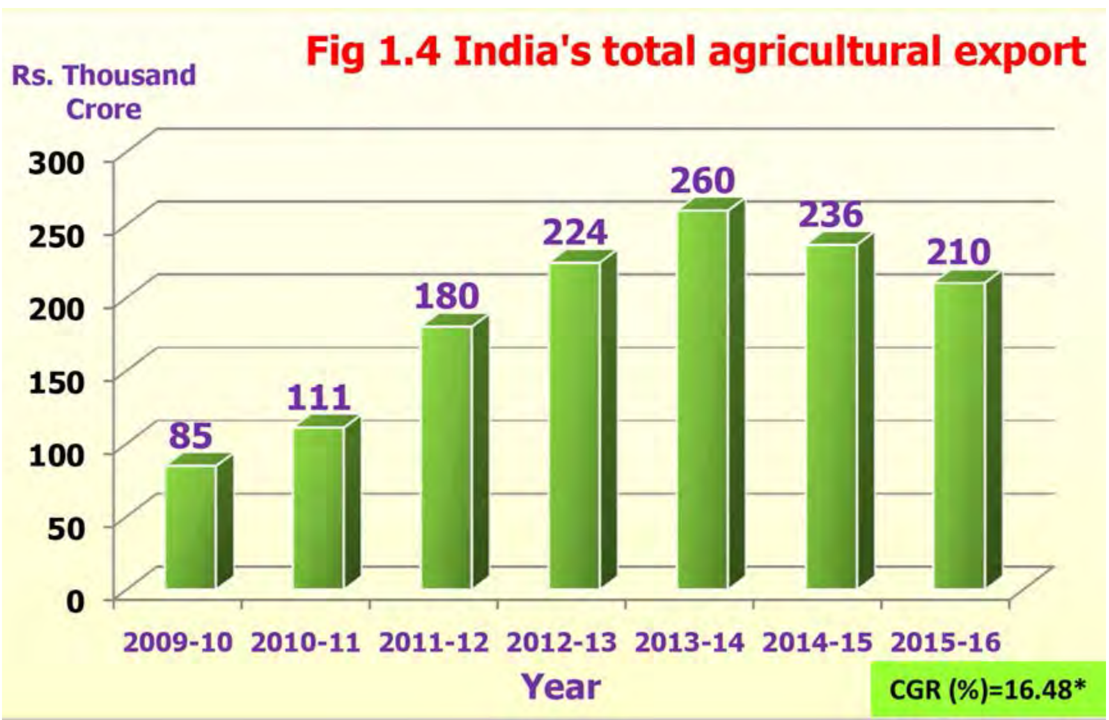


Fig 1.4 India's total agricultural export
Rs. Thousand Crore
300
250
200
150
100
50
0
85
111
180
224
260
236
210
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
Year
CGR (%)=16.48*

Chapter 2

Growth in export of agricultural products from India

According to market research the global food market is expected to bring in revenue of $3.03 trillion by 2020, registering a compound annual growth rate of 4.5 per cent from 2015 to 2020 (APEDA, 2014). It is no surprise that processed foods are an integral part of 10 essential sectors of Make in India initiative.

India as a country is endowed with fertile land, good irrigation facilities and modern technology in the field of cultivation and production of Agriculture/Horticulture based produce. This advantage is further augmented with development of food processing industry in the country. All these positives related to agriculture/horticulture sector make export of agro products a lucrative proposition for farmers and exporters.

India exported agricultural products to various countries worth Rs 2.10 lakh crore during the year 2015-16. The major agricultural products and their contributions in total agricultural export are provided in Table 2.1. and Fig 2.1 to 2.13.

Table 2.1 Export of major agricultural products from India (2015-16)

Rank	Product Name	Rs Crore	% to Total	Rank	Product Name	Rs Crore	% to Total
1	Marine Products	31183	14.83	20	Sesame Seeds	3012	1.43
2	Buffalo Meat	26682	12.69	21	Tobacco Manufac.	2076	0.99
3	Basmati Rice	22714	10.80	22	Alcoholic Beverages	2027	0.96
4	Spices	16374	7.79	23	Processed Vegetables	1696	0.81
5	Non-Basmati Rice	15086	7.17	24	Dairy Products	1682	0.80
6	Cotton Raw	12816	6.09	25	Pulses	1655	0.79
7	Sugar	9772	4.65	26	Other Cereals	1589	0.76
8	Coffee	5123	2.44	27	Cocoa Products	1260	0.60
9	Cashew	5025	2.39	28	Milled Products	1075	0.51
10	Fresh Vegetables	4763	2.26	29	Wheat	972	0.46
11	Tea	4719	2.24	30	Other Oil Seeds	963	0.46
12	Castor Oil	4616	2.20	31	Sheep/Goat Meat	838	0.40
13	Tobacco Un-manu.	4371	2.08	32	Poultry Products	767	0.36
14	Groundnut	4039	1.92	33	Vegetable Oils	518	0.25
15	Fresh Fruits	3918	1.86	34	Mollases	513	0.24
16	Processed Fruits	3761	1.79	35	Fruits / Vege. Seeds	485	0.23
17	Guargum	3613	1.72	36	Floriculture	478	0.23
18	Oil Meals	3484	1.66	-	Other	3291	1.57
19	Cereal Preparations	3312	1.58		Total	210273	100.00

Source: APEDA

Amongst all agro products, marine products ranked first with export of Rs 31183 crore contributing 14.83 % in total agricultural export of India. It was followed by buffalo meat (12.69%), basmati rice (10.80%), spices (7.79%), non-basmati rice (7.17%), cotton raw (6.09%) and so on.

Table 2.2 CAGR of exports of major agro-products (2009-10 to 2015-16)

Sr No.	Products	CAGR %
1	Marine Products	21.91**
2	Spices	15.88**
3	Cotton Raw (incld. waste)	2.41 NS
4	Fresh Vegetables	11.00*
5	Castor Oil	11.14*
6	Groundnut	14.83 NS
7	Fresh Fruits	18.40**
8	Processed Fruits & Juices	13.42**
9	Sesame Seeds	13.71*
10	Processed Vegetables	15.57**
11	Dairy Products	18.95 NS
12	Poultry Products	13.70**
13	Floriculture	9.14**
	India's Total Agri-Exports	**16.48***

** Significant at 5% level* *** Significant at 1% level*

Fig 2.1 Export of marine products from India

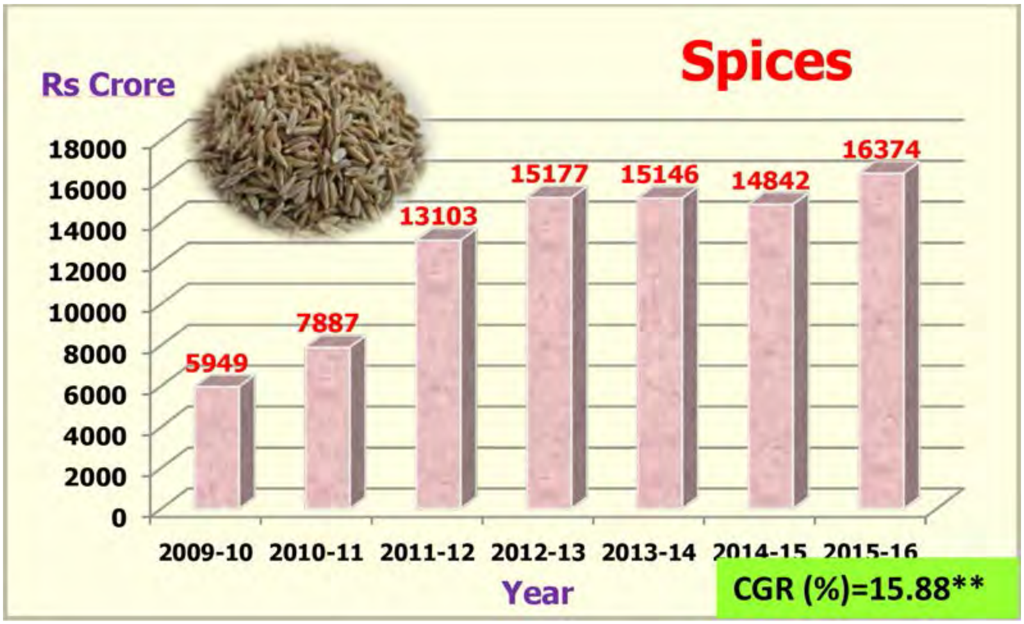


Fig 2.2 Export of spices from India

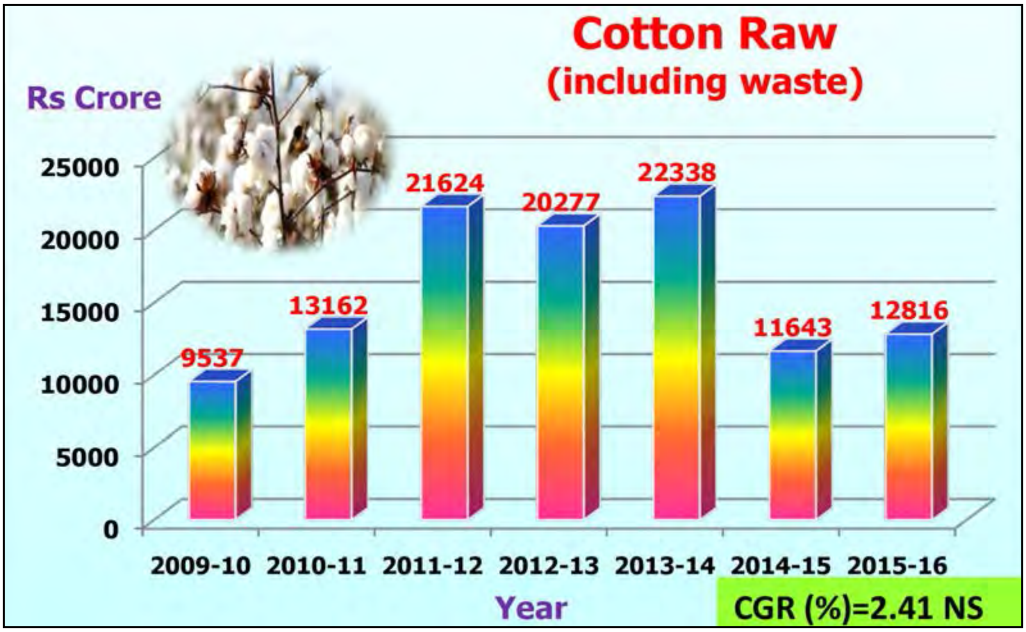


Fig 2.3 Export of cotton from India

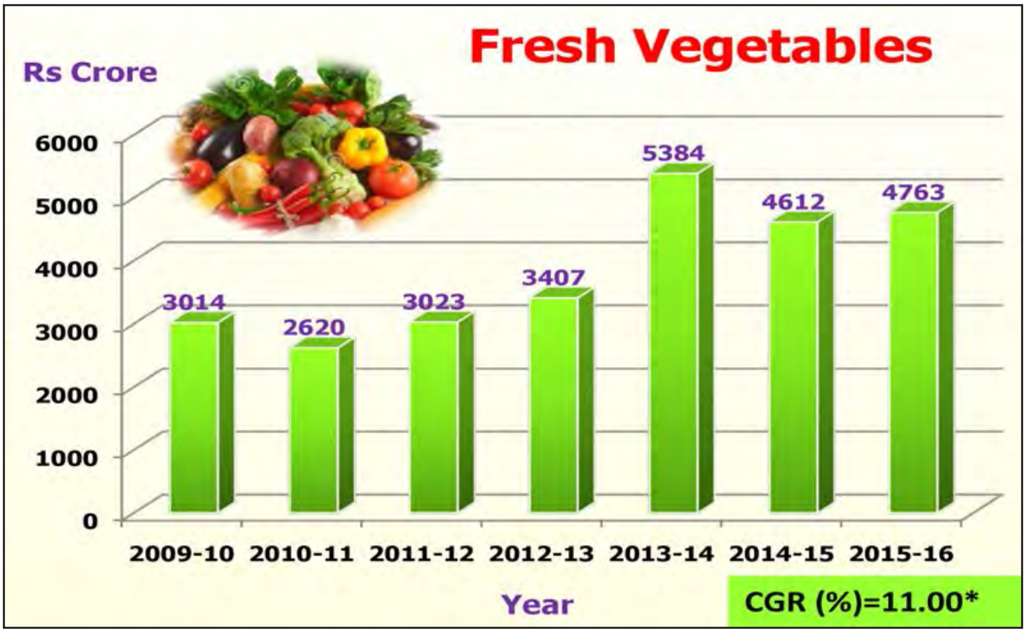


Fig 2.4 Export of fresh vegetables from India

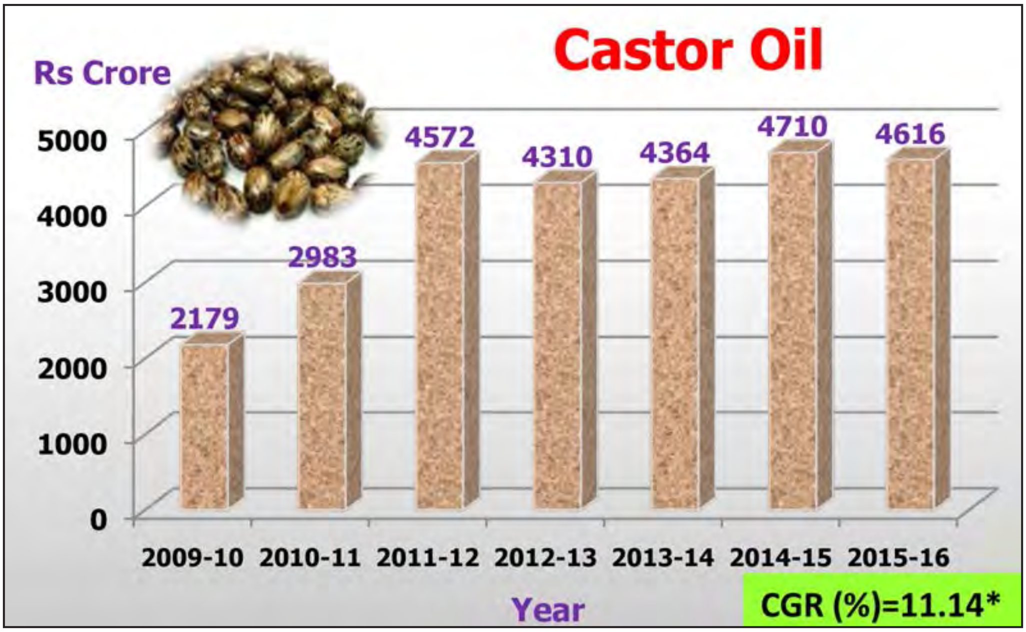


Fig 2.5 Export of castor oil from India

Fig 2.6 Export of groundnut from India

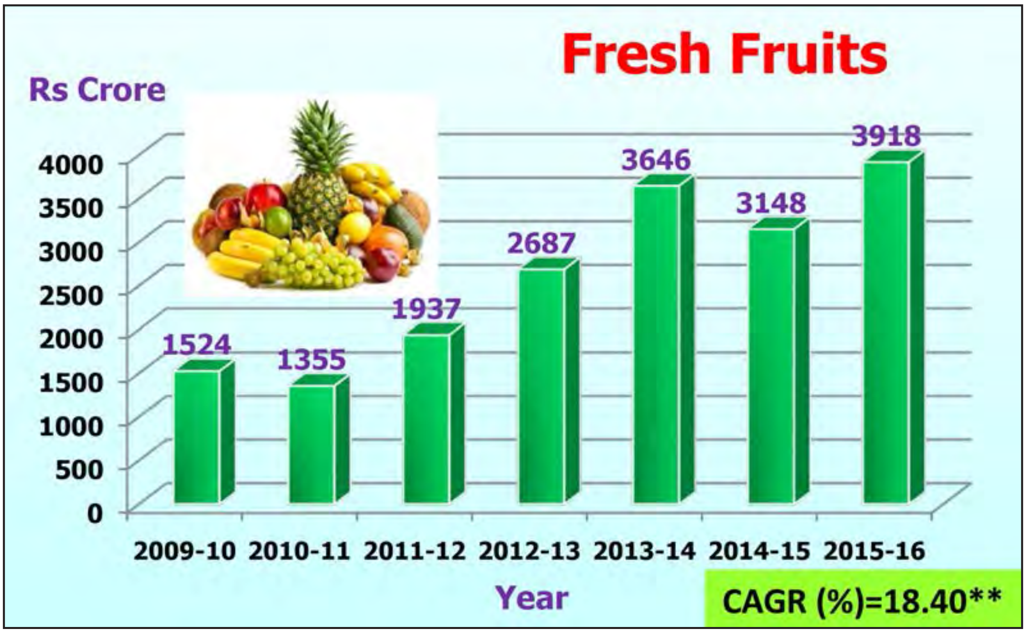


Fig 2.7 Export of fresh fruits from India

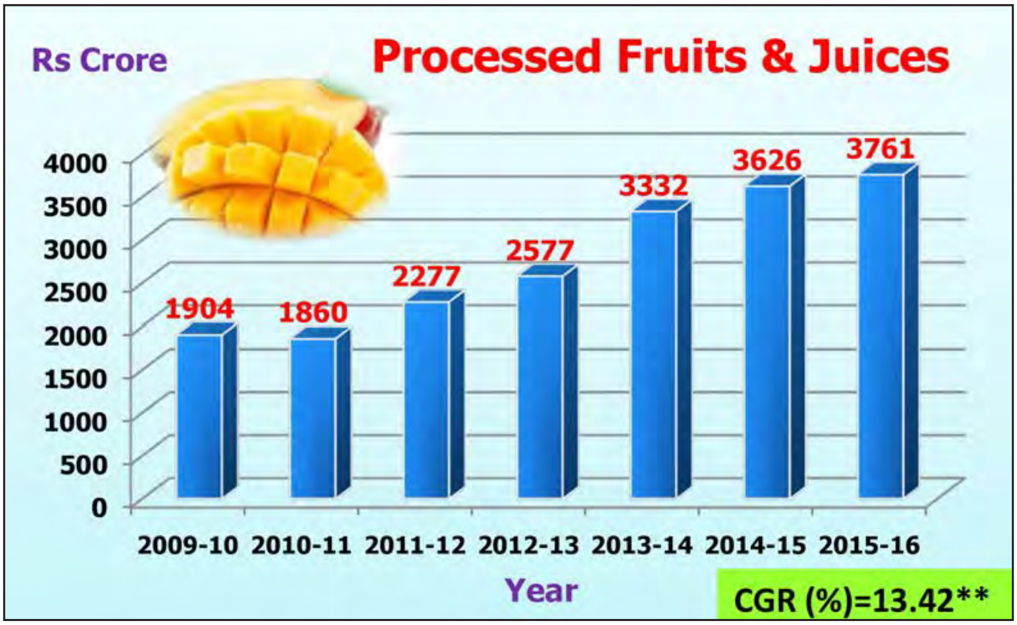


Fig 2.8 Export of processed fruits and juices from India

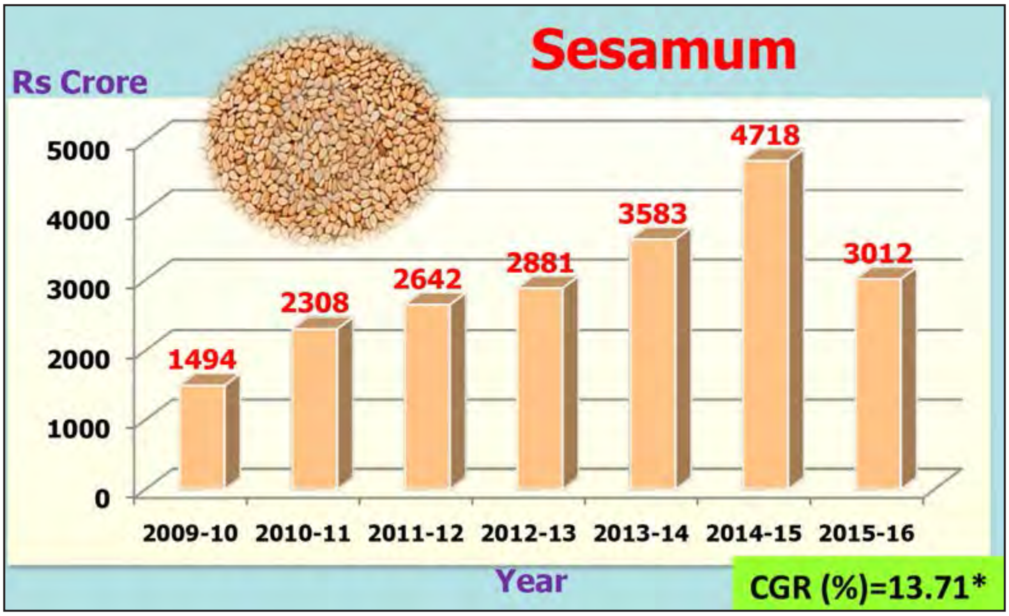


Fig 2.9 Export of sesamum from India

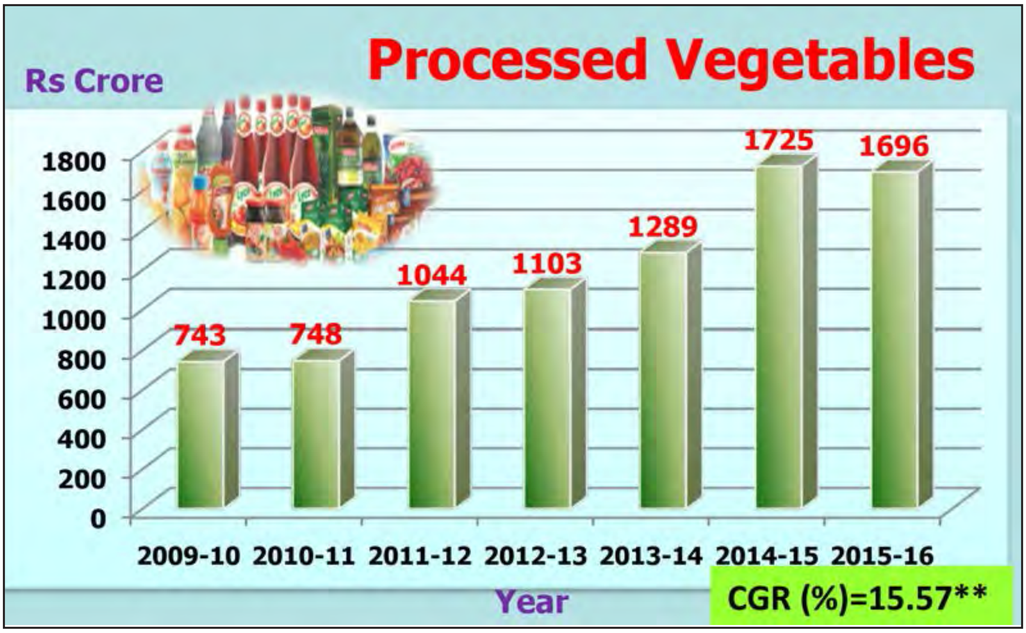


Fig 2.10 Export of processed vegetables from India

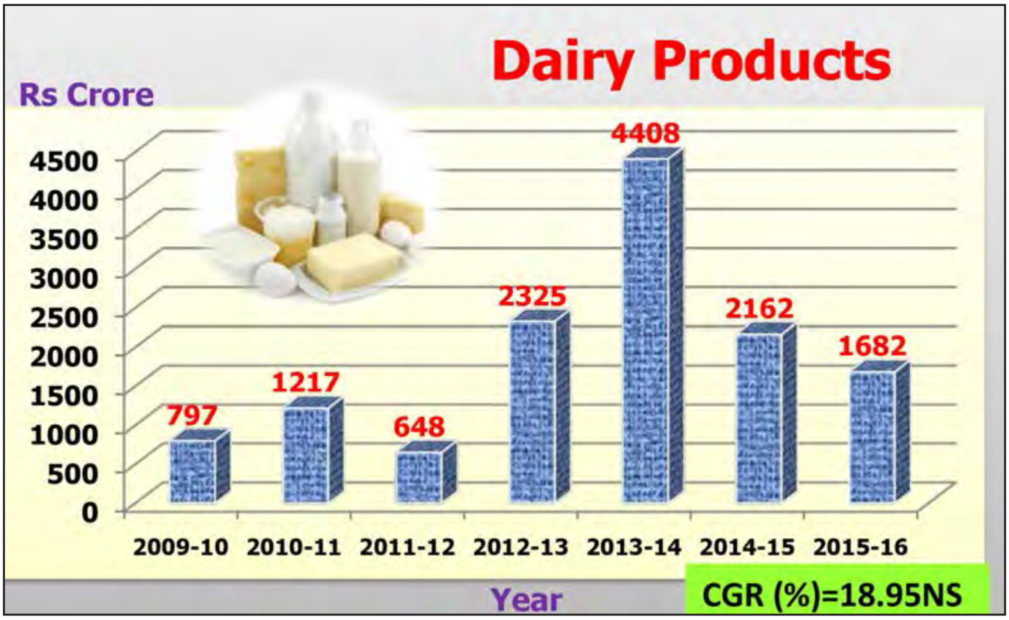


Fig 2.11 Export of dairy products from India

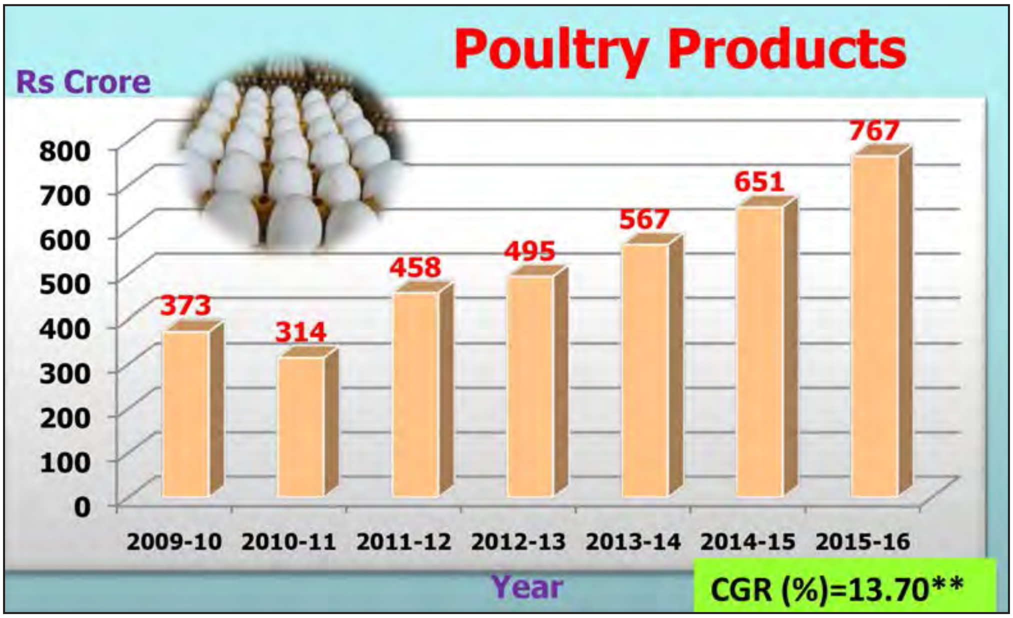


Fig 2.12 Export of poultry products from India

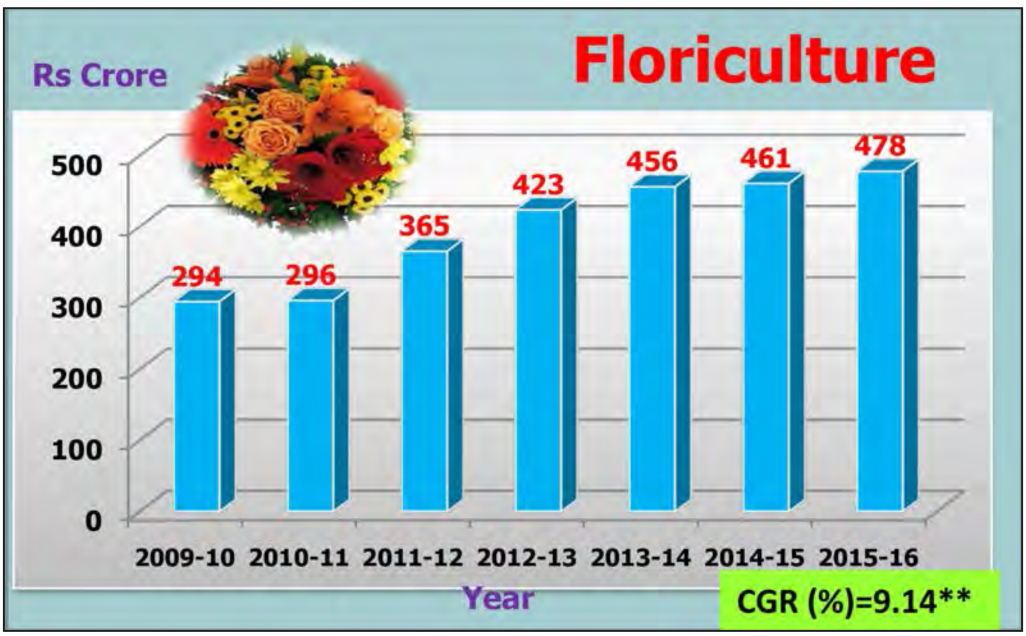


Fig 2.13 Export of floriculture from India

Chapter 3

Export potential of fruits and vegetables

India's diverse climate ensures availability of all varieties of fresh fruits & vegetables. It ranks second in fruits and vegetables production in the world, after China. India produces nearly 15 and 11 per cent of the world's fruits and vegetables, respectively. As per National Horticulture Database, India produced 86.60 million metric tonnes of fruits from 6.11 million hectares and 169.48 million metric tonnes of vegetables from 9.54 million hectares during 2014-15 (NHB, 2016). The state of Gujarat contributes 9.00 and 7.10 per cent in Indian fruits and vegetables production, respectively (NHB, 2015).

India is the largest producer of mango, banana, papaya and guava. Amongst vegetables, India is the largest producer of ginger and okra and ranks second in production of potato, onion, cauliflower, brinjal, cabbage, *etc*. The vast production base offers India tremendous opportunities for export.

Recently, the export of fruits and vegetables from India is slowly gaining pace. This has occurred due to concurrent developments in the areas of cold chain infrastructure, increase in productivity and quality through research, modern post-harvest technologies, favourable government policies and various initiatives taken by APEDA.

The fruits and vegetables are exported in fresh/chilled as well as in processed forms. Category-wise export of fruits and vegetables from India by quantity as well as by value were worked out. The results are presented in Table 3.1 and Fig 3.1 to 3.3.

The data presented in Table 3.1 shows that during the year 2015-16, India exported 3135 thousand tons of fruits and vegetables worth of Rs 14495 crore in various form *viz*., fresh fruits (504 thousand tons worth of Rs 3525 crore), processed fruits (450 thousand tons worth of Rs 3697 crore), fresh vegetables (1901 thousand tons worth of Rs 4867 crore), processed vegetables (269 thousand tons worth of Rs 1913 crore) and fruits/vegetables seeds (11 thousand tons worth of Rs 494 crore). Looking to % share in total export of fruits and vegetables, fresh vegetable accounted for the highest share (33.58%) followed by processed fruits (25.50%), fresh fruits (24.32%) and processed vegetables (13.20%) whereas share of fruits/vegetable seeds was very negligible (3.40%).

Table 3.1 Category-wise export of fruits and vegetables from India

Year	Fruits		Vegetables		Fruits/ Veg. Seeds	Total
	Fresh	Processed	Fresh	Processed		
Quantity (thousand tons)						
2006-07	353	330	1656	264	8	2612
2007-08	366	351	1361	253	10	2341
2008-09	470	368	2178	340	9	3365
2009-10	475	410	2088	299	9	3280
2010-11	418	370	1682	258	12	2739
2011-12	448	425	2044	323	15	3256
2012-13	498	417	2435	307	17	3674
2013-14	481	462	2436	275	18	3672
2014-15	427	471	2074	315	12	3299
2015-16	504	450	1901	269	11	3135
CGR%	**2.79***	**3.74****	**3.28**	**0.57**	**5.90***	**3.03**
Value (Rs crore)						
2006-07	899	1168	1599	721	122	4508
2007-08	919	1223	1529	681	142	4494
2008-09	1163	1638	2514	993	120	6429
2009-10	1475	1685	3059	1043	145	7407
2010-11	1271	1816	2701	889	185	6861
2011-12	1799	2198	3033	1272	288	8591
2012-13	2504	2342	3483	1495	348	10171
2013-14	3298	3040	5463	1698	411	13909
2014-15	2771	3411	4703	2050	427	13362
2015-16	3525	3697	4867	1913	494	14495
CGR%	**16.47****	**13.22****	**13.50****	**12.50****	**17.89****	**14.04****
% to total (2015-16)	**24.32**	**25.50**	**33.58**	**13.20**	**3.40**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Further, it was observed that the export of fruits in both the categories *viz.* fresh and processed reported significant annual growth of 2.79 and 3.74%, respectively by quantity during the last decade. Similarly, by value also they reported significant rise of 16.4 and 13.22% per annum, respectively. These trends show that there is a good scope for export of fresh as well as processed fruits from India. It also indicates that processed fruits are moving at a faster rate as compare to fresh fruits.

In case of vegetables, both the categories *viz*. fresh and processed did not show any significant growth by quantity. But by value, both the categories reported significant growth of 13.50 and 14.50% per annum, respectively. This rise might be due to rise in prices of vegetables and also due to rise in value of US dollar during this period.

The export of fruit/vegetable seeds showed significant rise by quantity (5.90% per annum) as well as by value (17.89% per annum) during last decade. Overall, export of fruits and vegetables by quantity did not show any significant growth but by value it reported a significant rise of 14.04% per annum.

The results indicate that export of fruits has peformed well but in case of vegetables, more efforts are needed in a more comprehensive manner along with appropreate government policy measures to improve our exports in future.

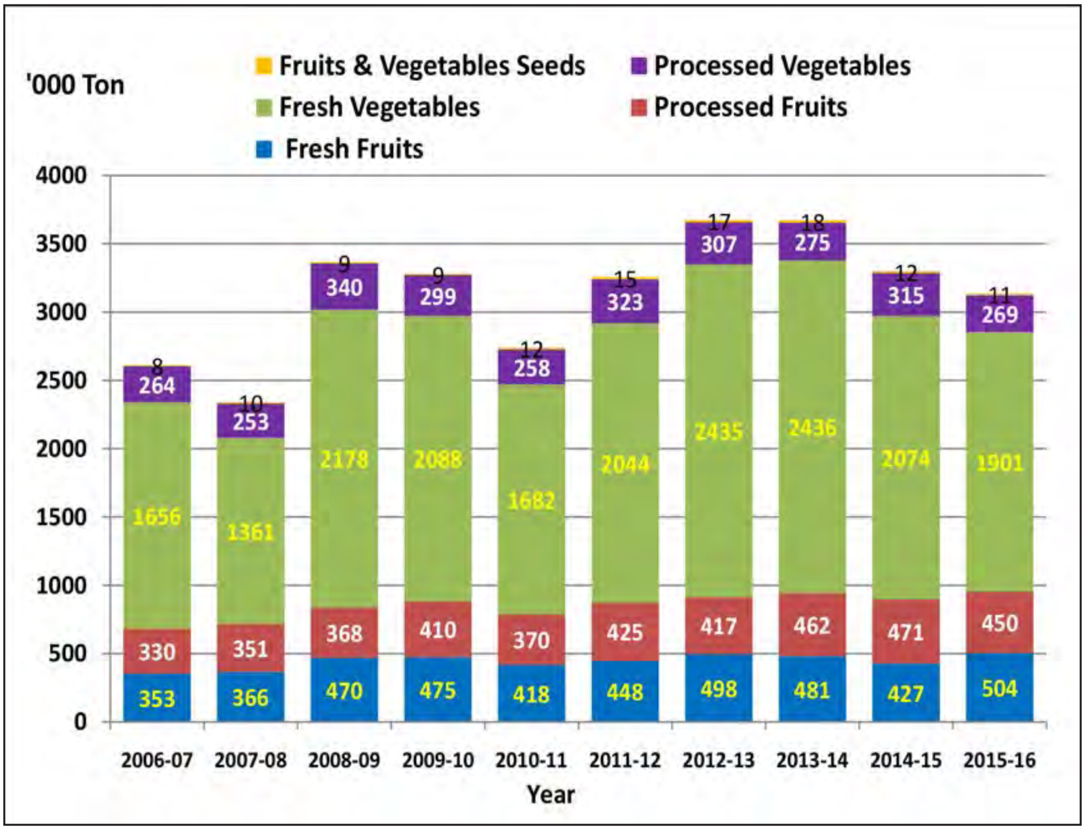


Fig 3.1 Category-wise export of fruits and vegetables from India (by quantity)

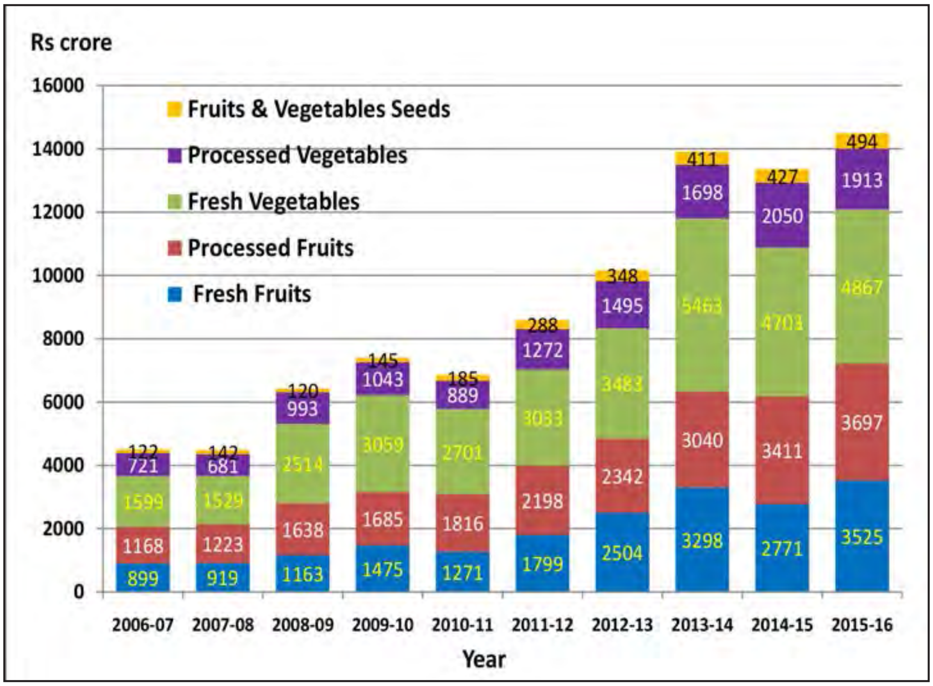


Fig 3.2 Category-wise export of fruits and vegetables from India (by value)

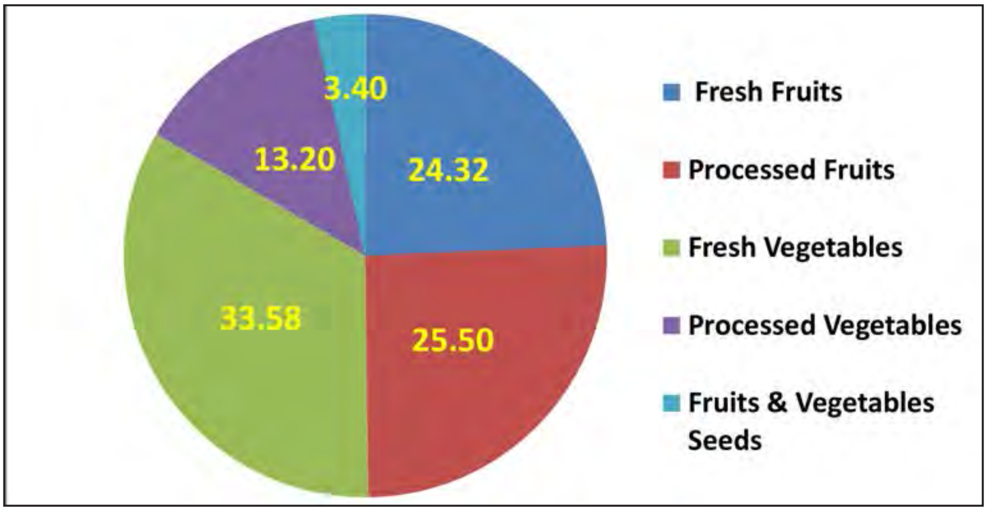


Fig 3.3 Category-wise % share in total exports of fruits and vegetables from India (2015-16)

Chapter 4

Export of fruits from India

4.1 Area, production and productivity of fruits

India is the second largest producer of fruits in the world after China and is known as fruit basket of world. India is endowed with a remarkably heterogeneous area characterized by a great diversity of agro climatic zones, allowing for production of a variety of horticultural crops such as fruits, vegetables, flowers, spices, plantation crops, root and tuber crops, and medicinal and aromatic crops. The data in Table 4.1 shows, that area and production of horticultural crops is increased from 16.6 million ha and 145.8 million MT to 24.2 million ha and 277.4 million MT during the last 14 years. During the last two decades, the production became almost double in horticultural crops, which shows great potential in terms of income and foreign exchange earnings.

Table 4.1 Area, production and productivity of horticultural crops in India

Year	Area (Million ha)	Production (Million MT)	Productivity (MT/ha)
1991-92	12.8	96.6	7.5
2001-02	16.6	145.8	8.8
2002-03	16.3	144.4	8.9
2003-04	19.2	153.3	8.0
2004-05	21.1	170.8	8.1
2005-06	18.7	182.8	9.8
2006-07	19.4	191.8	9.9
2007-08	20.2	211.2	10.5
2008-09	20.7	214.7	10.4
2009-10	20.9	223.1	10.7
2010-11	21.8	240.5	11.0
2011-12	23.2	257.3	11.1
2012-13	23.7	268.8	11.3
2013-14	24.2	277.4	11.5

Source: Department of Agriculture, Cooperation and Farmers Welfare, GoI

The production share of fruits was 32.08 per cent among all horticultural crops, during the year 2013-14. The production of fruit crops became more than double in the last recent 14 years from 43 million MT to 88.98 million MT. During the year 2013-14, the area and production under fruit crops was 7.22 million ha and 88.98 million MT.

Table 4.2 Area, production and productivity of fruits in India

Year	Area ('000ha)	Production ('000 MT)	Productivity (MT/ha)
1991-92	2874	28632	10.0
2001-02	4010	43001	10.7
2002-03	3788	45203	11.9
2003-04	4661	45942	9.9
2004-05	5049	50867	10.1
2005-06	5324	55356	10.4
2006-07	5554	59563	10.7
2007-08	5857	65587	11.2
2008-09	6101	68466	11.2
2009-10	6329	71516	11.3
2010-11	6383	74878	11.7
2011-12	6705	76424	11.4
2012-13	6982	81285	11.6
2013-14	7216	88977	12.3
% share to horticultural crops (2013-14)	**29.82**	**32.08**	

Source: Department of Agriculture, Cooperation and Farmers Welfare, GoI

The major fruits grown in India are Mango (35.41% of total area under fruits), Citrus (15.60%) and Banana (13.45%). Other grown fruits are Apple, Guava, Pomegranate, Grapes, Jackfruit, Pineapple, Papaya, Sapota, Aonla and others. Amongst fruits, the country ranks first in production of Banana (33.74%) followed by Mango (21.39%) and citrus (13.46%).

Table 4.3 Area and production of fruits in India (2014-15)

Fruits	Area			Production		
	'000 ha	% share	Rank	'000 MT	%	Rank
Mango	2163	35.41	1	18527	21.39	2
Citrus	953	15.60	2	11655	13.46	3
Banana	822	13.45	3	29221	33.74	1
Apple	319	5.22	4	2134	2.46	7
Guava	246	4.03	5	3994	4.61	5
Pomegranate	181	2.96	6	1789	2.07	10
Grapes	123	2.01	7	2823	3.26	6
Jackfruit	118	1.94	8	2088	2.41	8
Pineapple	116	1.90	9	1984	2.29	9
Papaya	115	1.88	10	4913	5.67	4
Sapota	106	1.74	11	1339	1.55	11
Aonla/Gooseberry	95	1.56	12	1173	1.35	12
Others	751	12.29	-	4962	5.73	-
Total Fruits	**6110**	**100.00**		**86602**	**100.00**	

Source: NHB

Table 4.4 Major fruits producing states in India (2013-14)

States	Area ('000 ha)	Production ('000 MT)
Maharashtra	1565.0	13457.9
Andhra Pradesh	640.1	10510.6
Gujarat	370.8	8002.0
Tamil Nadu	328.6	7369.9
Uttar Pradesh	379.0	6887.4
Karnataka	396.0	6652.4
Madhya Pradesh	203.8	5696.0
Telangana	364.5	4441.0
Bihar	302.1	4013.6
West Bengal	223.5	2909.7
Others	2442.6	19036.5

Source: NHB

The major producing states in the country are Maharashtra, Andhra Pradesh, Gujarat, Tamil Nadu, Uttar Pradesh, Karnataka, Madhya Pradesh, Telangana, Bihar, West Bengal and others. Maharashtra ranks first in terms of area under fruits in India followed by Andhra Pradesh, Karnataka, Uttar Pradesh and Gujarat. Gujarat State ranks 5th in terms of area (5% share to India's area) and 3rd in terms of production (9% share to India's production), during the year 2013-14.

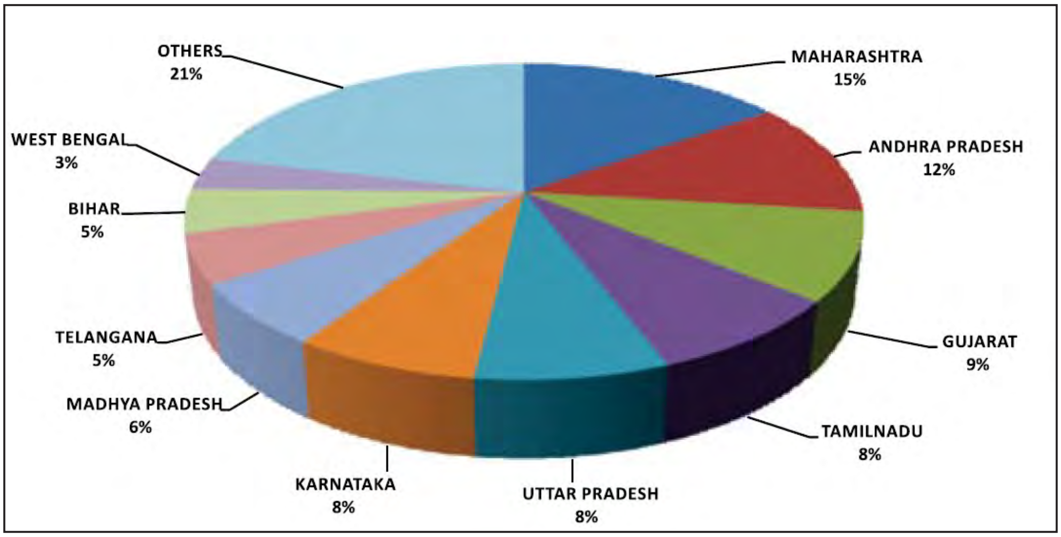


Fig 4.1 Leading fruits producing states in India (2013-14)

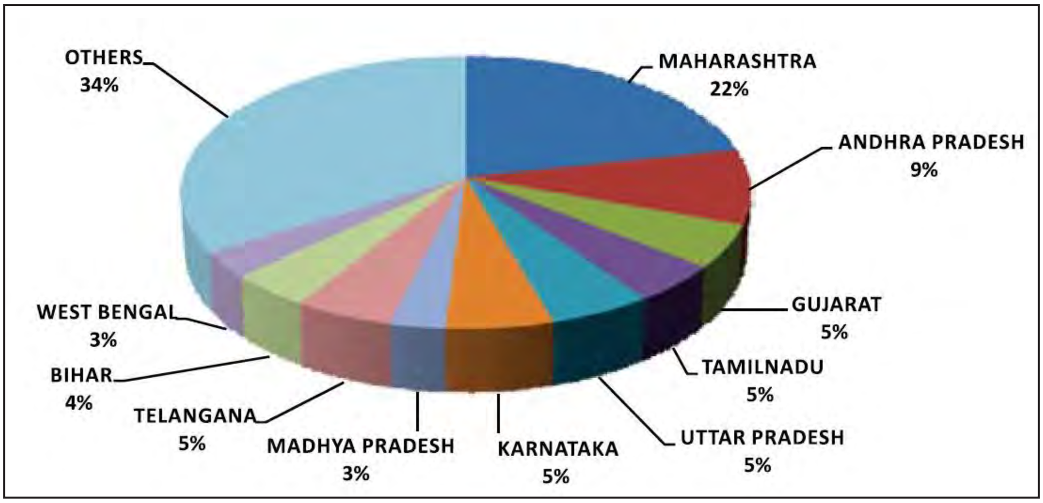


Fig 4.2 Leading fruits growing states in India (2013-14)

During the year 2014-15, area and production in Gujarat state was 0.39 million ha and 8.33 MT respectively. Amongst all fruits, Mango ranks first in area with 38.20% share and second in production with 14.65% share. Banana is the major producing fruit crop of Gujarat state.

Table 4.5 Area and production of fruits in Gujarat (2014-15)

Sr. No.	Fruits	Area (ha)	% to Total	Production (MT)	% to Total
1	Mango	150048	38.20	1219710	14.65
2	Banana	67016	17.06	4324357	51.92
3	Citrus	41742	10.63	462416	5.55
4	Chiku	29421	7.49	321318	3.86
5	Coconut(1000 nuts)*	22451	-	211700	-
6	Papaya	19128	4.87	1170638	14.06
7	Date Palm	17882	4.55	164282	1.97
8	Pomegranate	14768	3.76	171659	2.06
9	Ber	11880	3.02	120916	1.45
10	Guava	11144	2.84	146058	1.75
11	Aonla	9669	2.46	95624	1.15
12	Cashew Nut	8422	2.14	27688	0.33
13	Custard Apple	5336	1.36	55041	0.66
14	Other	6390	1.63	48597	0.58
	Total	**392846**	**100.00**	**8328302**	**100.00**

** not included in total* *Source : Agriculture and Cooperation Department, GoG*

4.2 Product-wise export of major fruits

India is also a major exporter of fruits to the world. The vast production base offers India tremendous opportunities for export. During 2015-16, India exported fruits and vegetables worth Rs 8,391.41 crores which comprised of fruits worth Rs 3,524.50 crores. Mangoe, walnut, grape, banana and pomegranates accounts for larger portion of fruits exported from the country. Fruit have a great demand in the international market. Therefore, they are one of the potential earners of foreign exchange.

The total fruits (fresh + processed) export in terms of value was 7221 crores during the year 2015-16. The product-wise export of major fruits during the year 2015-16 is presented in Table 4.6 and Fig 4.3. It shows that mango ranked first with Rs 1961.93 crore accounting for 27.17% in the total export of fruits from India followed by grapes (21.35%). These two fruits *i.e.* mango and grape together contributes about half of the fruits export. Whereas pomegranate and banana contributes 5.76 and 4.93% respectively.

Table 4.6 Product-wise export of major fruits (2015-16)

Rank	Fruit Crop	Product	Value in Rs Crore		% share
1	**Mango**	Fresh/Dried	317.10	**1961.93**	27.17
		Pulp	796.17		
		Squash	61.02		
		Jams/Jellies/Marmalades	742.82		
		Sliced Dried	44.82		
2	**Grape**	Fresh	1337.78	**1541.95**	21.35
		Dried (Raisins)	204.17		
3	**Pomegranate**	Fresh	-	**416.00**	5.76
4	**Banana**	Fresh	-	**356.13**	4.93
5	**Walnut**	Fresh	-	**117.92**	1.63
6	**Citrus**	Lemons & Limes Fresh/Dried	74.07	**86.81**	1.20
		Other Citrus Fruit Fresh/Dried	12.74		
7	**Melon**	Water Melons, Fresh	54.46	**80.55**	1.12
		Other Melons Fresh	26.09		
8	**Papaya**	Fresh/Dried	-	**56.78**	0.79
9	**Guava**	Guavas Fresh/Dried	7.12	**33.32**	0.46
		Jams/Jellies/Marmalades	26.20		
10	**Sapota**	Fresh	-	**9.67**	0.13
	Other	-	-	**2559.94**	35.45
	Total (Fresh + Processed)			**7221.00**	100.00

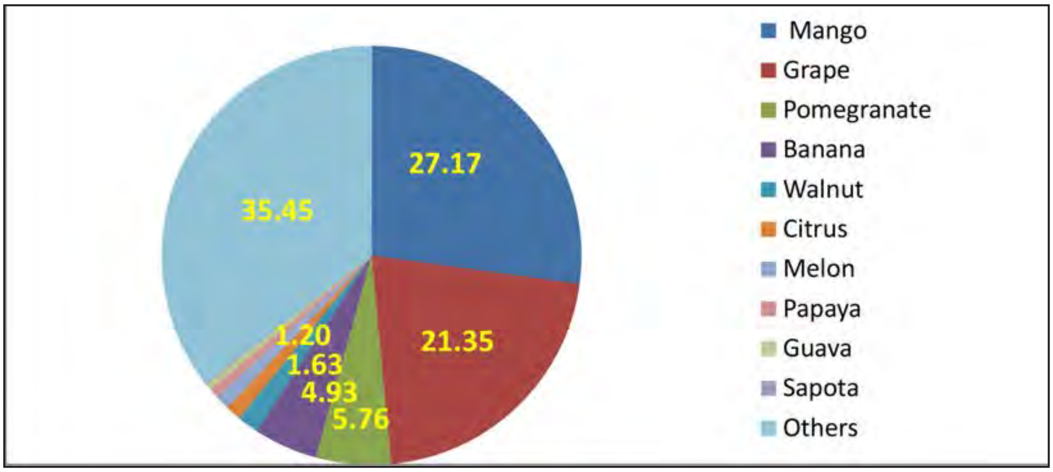


Fig 4.3 Commodity-wise share (%) in total export of fruits (2015-16)

4.3 Major Fruits

Mango

Mango, the word itself keeps us tempting. With the onset of the summer season itself, kids start demanding for ripe and juicy mangoes. Not just kids but everyone loves to relish mangoes. It is the "King of Fruits". Also referred to as the "peach of the tropics," this fruit is one of the main types of fruit considered exotic. Because it is sweet, refreshing and aromatic, it is commercialized throughout the world. Amongst all fruits, Mango ranks first in area with 35.41% share and second in production with 21.39% share in India.

Mango is commercially grown in more than 80 countries. India is the major Mango growing country, contributing nearly 46.74 per cent of world's area and 40.48 per cent of world's production. In India, during the year 2014-15, area under mango was 2.16 million ha and the production was 18.53 million MT (Table 4.7).

Table 4.7 Area, production and productivity of mango in India

Sr. No	Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
1	2005-06	2081	12663	6.1
2	2006-07	2154	13734	6.4
3	2007-08	2201	13997	6.4
4	2008-09	2309	12750	5.5
5	2009-10	2312	15027	6.5
6	2010-11	2297	15188	6.6
7	2011-12	2378	16196	6.8
8	2012-13	2500	18002	7.2
9	2013-14	2516	18431	7.3
10	2014-15	2163	18527	8.6

Source: NHB

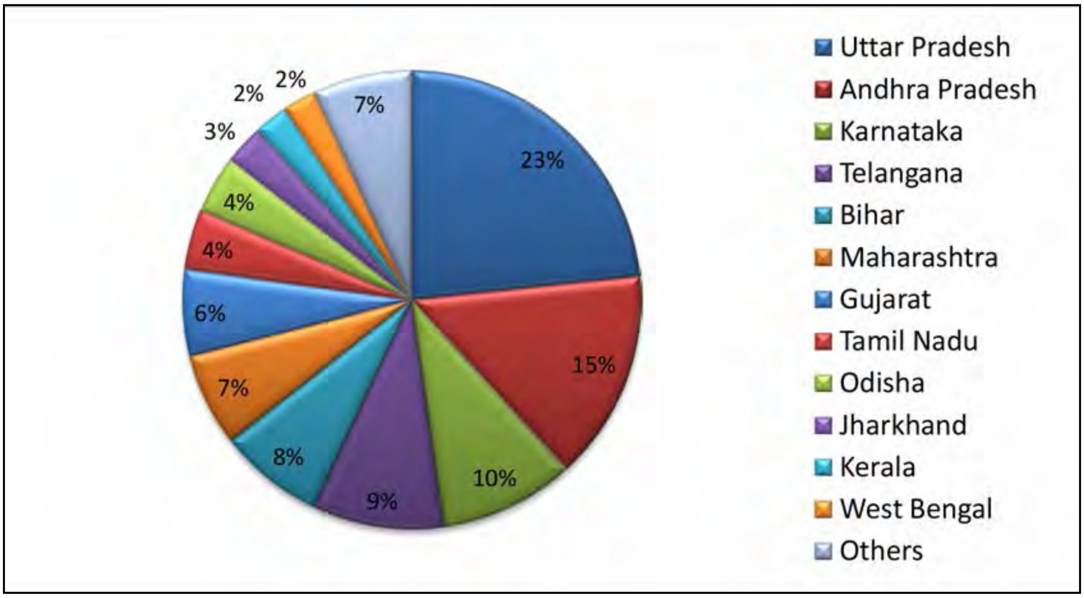


Fig 4.4 Leading mango producing states in India (2013-14)

The major mango growing states are Andhra Pradesh, Uttar Pradesh, Karnataka, Bihar, Gujarat and Tamil Nadu. Uttar Pradesh is the leading producing state of mango, contributes 23% of total production in India, followed by Andhra Pradesh (15%) and Karnataka (10%) (Fig 4.4).

Mangoes are exported in various forms *viz*., fresh/dried, pulp squash, jams/ jellies/ marmalades and slice. The growth in exports of mango during study period was worked out and presented in Table 4.8.

The export of fresh/dried mango, in term of quantity, was significantly declined by 7.86% annually during the last decade whereas the export in form of Jams/Jellies/Marmalades has significantly increased by 15.83% annually during the same period. It indicates that the demand for mango shifted from fresh mango to processed products in export market. Other forms of mango exports *viz*., pulp, squash and sliced did not show any significant change.

In value term, export of all forms of mango except squash significantly increased during the last decade with an overall growth of 9.90% per annum. Further, it was observed that pulp and Jams/ Jellies/ Marmalades products were the major contributors in mango export, with a share of 40.58 and 37.86%, respectively during the year 2015-16, whereas contribution of squash and slice in total mango export was very limited.

Table 4.8 Export of mango from India

Year	Fresh/ Dried	Pulp	Squash	Jams/Jellies/ Marmalades	Sliced Dried	Total
Quantity (in tons)						
2006-07	79061	156836	1778	21086	2991	261752
2007-08	54351	166752	13022	31076	5045	270246
2008-09	83703	173014	5584	32906	1499	296705
2009-10	74461	186198	653	44902	2101	308314
2010-11	58863	170220	1439	44140	1210	275873
2011-12	63441	150499	5205	58090	5481	282717
2012-13	55585	147816	7709	62304	2265	275678
2013-14	41280	174860	8887	73868	2758	301653
2014-15	42998	154821	10304	88333	4193	300649
2015-16	36329	128866	9457	94511	3644	272807
CGR%	**-7.86****	**-1.85**	**14.80**	**15.83****	**3.19**	**0.54**
Value (in Rs Crore)						
2006-07	141.94	505.83	6.87	93.6	10.95	759.19
2007-08	127.42	509.69	49.09	138.11	7.58	831.89
2008-09	170.71	752.99	31.83	207.22	4.83	1167.58
2009-10	200.54	744.61	2.92	245.89	7.81	1201.77
2010-11	164.84	818.93	5.91	236.27	8.4	1234.35
2011-12	209.74	620.83	25.37	339.56	19.01	1214.51
2012-13	264.72	608.56	41.59	388.46	17.73	1321.06
2013-14	285.43	772.95	54.89	555.28	26.86	1695.41
2014-15	302.54	841.39	63.21	622.16	38.81	1868.11
2015-16	317.1	796.17	61.02	742.82	44.82	1961.93
CGR%	**10.26****	**4.15***	**20.35**	**21.72****	**21.80****	**9.90****
% to total (2015-16)	**16.16**	**40.58**	**3.11**	**37.86**	**2.28**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Top 10 Export Destinations for various forms of Mango during 2015-16 are reported in Table 4.9. It shows that Saudi Arab was the largest export market for pulp contributing about 27.88% of total pulp export of our country followed by Netherland (10.93%) and Yemen (6.88%). In case of Jams/Jellies/Marmalades, the top most export destination was Netherland (26.84%) followed by Iran (10.72%) and USA (8.23%).

Table 4.9 Top 10 export destinations for mango (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Pulp				**Jams/Jellies/Marmalades**		
1	Saudi Arab	221.97	27.88	**1**	Netherland	199.36	26.84
2	Netherland	87.01	10.93	**2**	Iran	79.65	10.72
3	Yemen	54.78	6.88	**3**	U S A	61.15	8.23
4	Kuwait	51.46	6.46	**4**	Saudi Arab	54.25	7.30
5	U A E	46.92	5.89	**5**	U K	52.76	7.10
6	U S A	40.06	5.03	**6**	U A E	38.74	5.22
7	U K	37.44	4.70	**7**	France	31.51	4.24
8	Sudan	34.65	4.35	**8**	Japan	31.07	4.18
9	Germany	22.89	2.88	**9**	China	21.50	2.89
10	China	20.52	2.58	**10**	Yemen	18.91	2.55
Total (Incl. others)		**796.17**	**100.00**	**Total (Incl. others)**		**742.82**	**100.00**
	Fresh/Dried				**Squash**		
1	U A E	191.99	60.55	**1**	Netherland	12.80	20.98
2	U K	32.06	10.11	**2**	Saudi Arab	9.90	16.22
3	Saudi Arab	16.75	5.28	**3**	Iran	9.58	15.71
4	Nepal	13.94	4.39	**4**	Nepal	5.69	9.32
5	Kuwait	12.98	4.09	**5**	U A E	3.72	6.10
6	Qatar	10.23	3.23	**6**	France	3.01	4.94
7	U S A	7.34	2.32	**7**	U K	2.20	3.61
8	Baharain	6.33	2.00	**8**	Sri Lanka	1.99	3.26
9	Singapore	6.26	1.97	**9**	U S A	1.63	2.67
10	Oman	4.13	1.30	**10**	Tunisia	1.41	2.30
Total (Incl. others)		**317.10**	**100.00**	**Total (Incl. others)**		**61.02**	**100.00**

Quality is a very important aspect in export of fruits and vegetables. Export specifications for fruits and vegetables vary from country to country. Such quality parameters required by major importing countries in Mango crop are presented as under table 4.10.

Table 4.10 Export specifications for mango

Particulars	Variety	Middle East	Netherlands /Germany	UK	Japan	USA
Weight	Alphanso	200-250 g	250-300 g	250-300 g	250-300 g	250-300 g
	Kesar	200-250 g	225-250 g	225-250 g	250-300 g	250-300 g
Packing		1 Dozen/ 2.5 kg	1 Dozen/ 2.5 kg	1Dozen/ 2.5 kg	1 Dozen / 3.5 kg	1 Dozen / 3.5 kg
Storage Temp.		13°c	13°c	13°c	13°c	13°c
Transportation		By Sea	By Air	By Air	By Air	By Air

Grape

Grape is one of the important fruits of India. In India, during the year 2013-14, area and production was 118.7 thousand ha and 2585.3 thousand MT, respectively. Area and production became almost double during the last decade in the country (Table 4.11). Major grape growing states are Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, and the North-Western region covering Punjab, Haryana, Western Uttar Pradesh, Rajasthan and Madhya Pradesh. Maharashtra ranks first in terms of production accounting for more than 82.56% of total production and highest productivity in the country, followed by Karnataka (11.70%).

India is one of the major exporters of fresh Grape to the world. The details of export of grape from India are given in Table 4.12. It shows that the country has exported 155246 tons of grape worth of Rs 1541.95 crore to the world during the year 2015-16. Looking to the growth, fresh grape did not show any significant change in export by quantity but raisins (dried grape) reported 53.42% annual growth during last decade. By export value, both fresh as well as raisins reported 18.70 and 61.82% growth, respectively with an overall growth of 20.07% per annum. The fresh grapes, alone occupied 86.76% share in total grape export from India during the year 2015-16.

Table 4.11 Area, production and productivity of grape in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	60.5	1564.7	25.9
2005-06	66	1649.6	25
2006-07	65	1685	25.9
2007-08	68	1735	25.5
2008-09	80	1878	23.5
2009-10	106.4	880.7	8.3
2010-11	111	1235	11.1
2011-12	116	2220.9	19.1
2012-13	117.6	2483.1	21.1
2013-14	118.7	2585.3	21.8

Source: NHB

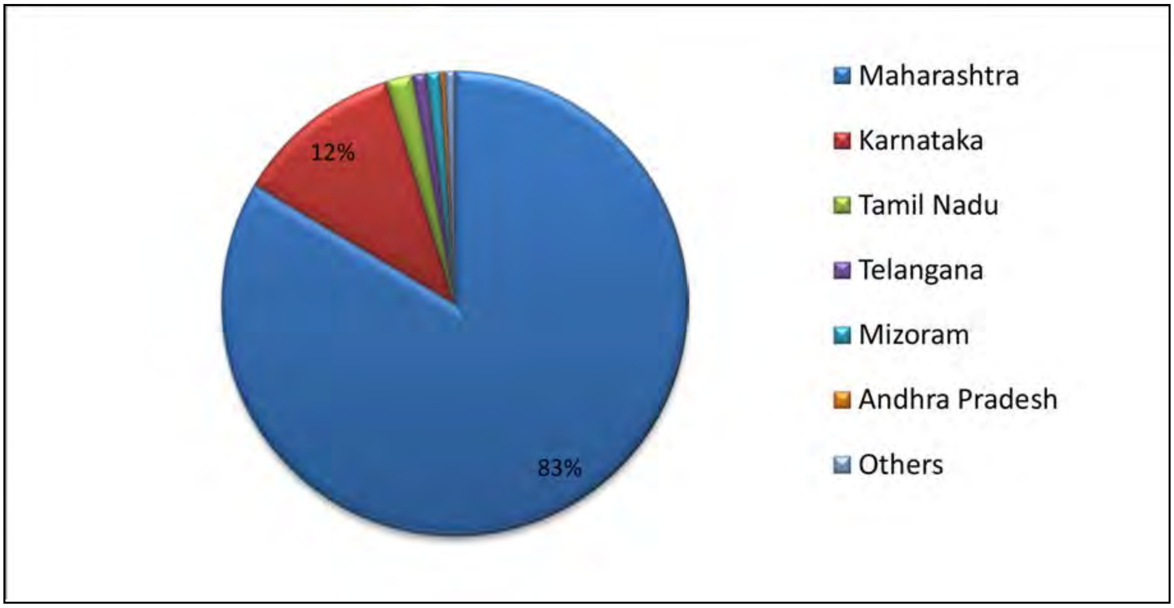


Fig 4.5 Leading grape producing states in India (2013-14)

Table 4.12 Export of grape from India

Year	Qty in Tons			Value in Rs Crore		
	Fresh	Raisins (Dried)	Total	Fresh	Raisins (Dried)	Total
2006-07	85563	218	85781	300.58	0.64	301.22
2007-08	96723	101	96824	317.07	0.46	317.53
2008-09	118133	6143	124276	367.06	38.96	406.02
2009-10	117338	13476	130814	431.07	111.69	542.76
2010-11	92437	5233	97670	391.01	34.67	425.68
2011-12	94860	9542	104402	516.76	60.93	577.69
2012-13	140967	30042	171008	982.04	268.84	1250.88
2013-14	160256	31602	191859	1437.07	223.12	1660.19
2014-15	94377	12326	106703	972.77	107.64	1080.41
2015-16	128422	26825	155246	1337.78	204.17	1541.95
CGR%	**3.38**	**53.42****	**5.49**	**18.70****	**61.82****	**20.07****
% to total (2015-16)	**-**	**-**	**-**	**86.76**	**13.24**	**100.00**

*** Significant at 1% level*

The major export destinations for grape are given in Table 4.13. It shows that in case of fresh grape, Netherland ranked first with 43.80% share followed by UK (15.44%) and Russia (9.50%). While in case of raisins, Saudi Arab ranked first with 11.06% share followed by Ukrain (10.79%) and UAE (9.14%).

Table 4.14 Export specifications for grape

Particulars	Variety	Middle East	Holland/ Germany	UK
Berry Size/ colour	Thompson Seedless	15 mm Amber	16 mm White/Amber	18 mm White
	Sharad Seedless	15 mm, Black	16 mm, Black	18 mm, Black
	Flame Seedless	-----	16 mm, Pink	18 mm, Pink
Packing		1 kg	4.5 kg /9 kg	4.5 kg /9 kg
Storage Temp.		0-1 °C	0-1 °C	0-1 °C

Table 4.13 Top 10 Export destinations for grape (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
Fresh				**Raisins (Dried)**			
1	Netherland	585.89	43.80	1	Saudi Arab	22.59	11.06
2	U K	206.54	15.44	2	Ukraine	22.04	10.79
3	Russia	127.05	9.50	3	U A E	18.66	9.14
4	U A E	97.94	7.32	4	Mexico	13.38	6.55
5	Germany	49.94	3.73	5	Poland	10.91	5.34
6	Saudi Arab	46.81	3.50	6	Malaysia	10.46	5.12
7	Thailand	40.12	3.00	7	Russia	9.57	4.69
8	Sri Lanka	22.85	1.71	8	Sri Lanka	9.23	4.52
9	Finland	20.13	1.50	9	Lithuania	8.63	4.23
10	Bangladesh	16.31	1.22	10	Romania	8.00	3.92
Total (Incl. others)		**1337.78**	**100.00**	**Total (Incl. others)**		**204.17**	**100.00**

Export quality specifications for Grape are presented in table 4.14. Quality parameters vary from country to country.

Pomegranate

Pomegranate is grown in tropical and subtropical regions of the world. It has been recognised internationally as super food considering its nutritional value. During the year 2013-14, the area and production in the country was 130.77 thousand ha and 1345.72 thousand MT, respectivly. In India, Maharashtra is the leading producer of pomegranate, contributing 70.22 per cent to the total India's production followed by Karnataka (9.97%), Gujarat (7.37%) and Andhra Pradesh (6.68%), Gujarat and Tamil Nadu.

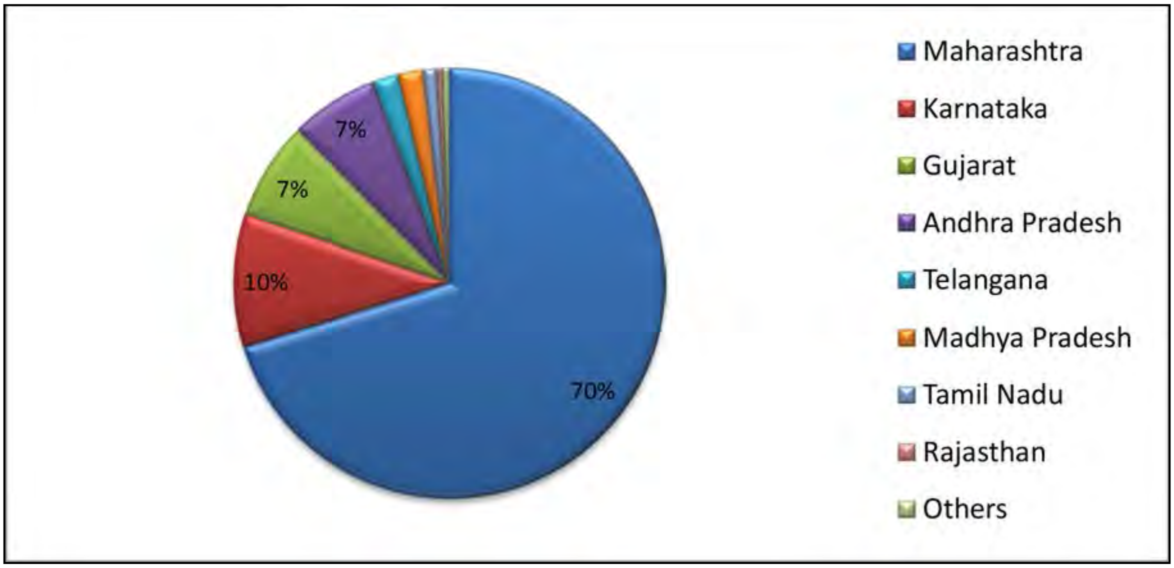


Fig 4.6 Leading pomegranate producing states in India (2013-14)

Data on export of pomegranate (fresh) from India are presented in Table 4.15 which indicate that the export by quantity did not show any change but by value it reported significant growth of 18.97% per annum during last decade.

Table 4.15 Export of pomegranate (fresh) from India

Year	Qty in Tons	Value in Rs Crore
2006-07	21670	79.57
2007-08	35175	91.19
2008-09	34811	114.62
2009-10	33415	119.43
2010-11	18212	70.95
2011-12	30162	147.28
2012-13	36027	234.5
2013-14	31328	298.52
2014-15	20997	323.61
2015-16	31072	416.00
CGR%	**-0.1**	**18.97****

*** Significant at 1% level*

The major export destinations for Indian pomegranate are presented in Table 4.3.3.2. It was noticed that UAE alone accounted for 61.01% in the total export of pomegranate from India in the year 2015-16 followed by Saudi Arab (7.63%) and Netherland (5.12%).

Table 4.16 Top 10 export destinations for pomegranate (fresh) (2015-16)

Rank	Country	Value Rs Crore	% to Total
1	U A E	253.80	61.01
2	Saudi Arab	31.76	7.63
3	Netherland	21.30	5.12
4	U K	14.85	3.57
5	Thailand	11.09	2.67
6	Kuwait	10.74	2.58
7	U S A	8.72	2.10
8	Malaysia	8.71	2.09
9	Sri Lanka	6.05	1.45
10	Baharain	5.96	1.43
Total (Incl. others)		**416.00**	**100.00**

Export quality specifications for Pomegranate are presented in table 4.3.3.3. Quality parameters vary from country to country.

Table 4.17 Export specifications for pomegranate

Particulars	Variety	Middle East	Netherlands/ Germany	UK
Size/Weight/ Colour	Ganesh, Bhagwa	300-450 g Red	250-300 g Red	250-300 g Red
	Arakata, Mrudula	200-250 g Deep red	200-250 g Deep red	200-250 g Deep red
Packing		5 kg	3 kg	3 kg
Storage		5 °C	5 °C	5 °C
Transportation		By Sea	By Sea	By Sea

Banana

Banana is the world's favourite fruit and the fourth most important food crop after rice, wheat and maize. India is the world's largest producer of banana, with 28% share. In India, during the year 2013-14, area, production and yield was 802.6 thousand ha, 29.724 million MT and 37 MT/ha respectively. The major banana growing states are Tamil Nadu, Gujarat, Maharashtra, Andhra Pradesh and Karnataka. The major producing states in India are Tamil Nadu (19%), Maharashtra (16.25%) and Gujarat (14.22%).

Table 4.18 Area, production and productivity of banana in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	589.6	16744.5	28.4
2005-06	569.5	18887.8	33.2
2006-07	604	20998	34.8
2007-08	658	23823	36.2
2008-09	709	26217	37
2009-10	770.3	26469.5	34.4
2010-11	830	29780	35.9
2011-12	796.5	28455.1	35.7
2012-13	776	26509.1	34.2
2013-14	802.6	29724.6	37

Source: NHB

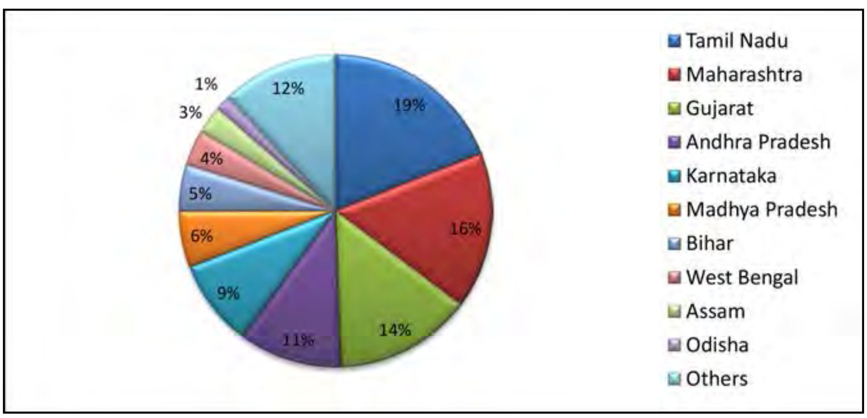


Fig 4.7 Leading banana producing states in India (2013-14)

Banana is the fourth largest contributor in total export of fruits from India. The details of banana export are presented in Table 4.19. It shows that export of banana was increased from 34831 tons in 2013-14 to 93673 tons in 2015-16. In value term also it increased from Rs 153.85 crore to Rs 356.13 crore during the same period. Due to insufficient time series data, growth rates could not be worked out.

Table 4.19 Export of banana (fresh) from India

Year	Qty in Tons	Value in Rs Crore
2013-14	34831	153.85
2014-15	63274	241.95
2015-16	93673	356.13

*Note: The export data was available for the year 2013-14 to 2015-16.

Major export destinations for Indian banana during 2015-16 are given in Table 4.20. UAE, Iran and Saudi Arab are leading the list contributing 32.93, 18.99 and 17.74% in total banana export from India, respectively.

Table 4.20 Top 10 export destinations for Indian banana (fresh) (2015-16)

Rank	Country	Value Rs Crore	% to Total
1	U A E	117.29	32.93
2	Iran	67.63	18.99
3	Saudi Arab	63.18	17.74
4	Oman	32.00	8.99
5	Kuwait	24.70	6.94
6	Qatar	17.81	5.00
7	Nepal	16.37	4.60
8	Baharain	10.54	2.96
9	Maldives	4.51	1.27
10	Malaysia	0.37	0.10
Total (Incl. others)		**356.13**	**100.00**

Export quality specifications for banana are presented in Table 4.21. Quality parameters vary from country to country.

Table 4.21 Export specifications for banana

Particulars	Variety	Middle East
Size/Weight/ Colour	Grand Naine Cavendish	Colour : Green, Weight of Bunch : 2.5 kg Fruits preferably straight
Packing		13 kg
Storage		13-14 °C
Transport		By Sea

Walnut

Walnut is the most important temperate nut fruit of the country. During the year 2013-14, in India area and production under walnut was 121.87 thousand ha and 240.63 thousand MT. The major growing area is in Jammu and Kashmir, Uttaranchal, Himachal Pradesh and Arunachal Pradesh. Out of these states, Jammu & Kashmir occupying the largest share in total area and production (Fig 4.8).

The growth in export of walnut from India during last decade is given in Table 4.22. The country has exported 3292 tons of walnuts worth of Rs 117.92 crore to the world during the year 2015-16. But it did not show any significant growth during last decade.

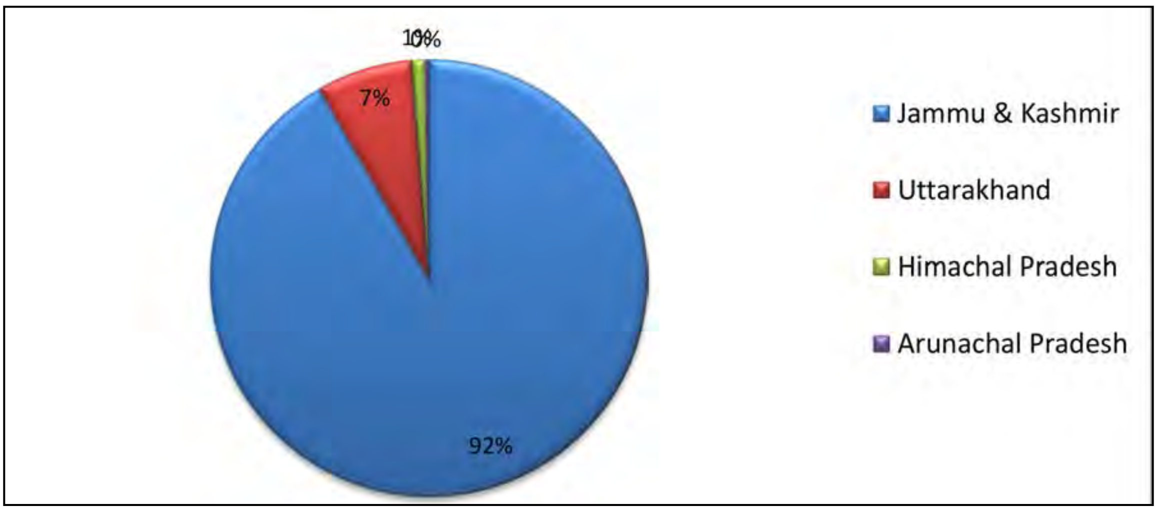


Fig 4.8 Leading walnut producing states in India (2013-14)

Table 4.22 Export of walnut from India

Year	Qty in Tons	Value in Rs Crore
2006-07	5063	118.04
2007-08	6716	162.08
2008-09	5696	141.24
2009-10	9073	197.90
2010-11	5762	166.29
2011-12	5842	231.08
2012-13	5295	199.84
2013-14	6726	324.53
2014-15	2666	136.45
2015-16	3292	117.92
CGR%	**-6.73**	**2.00**

Top 10 export destinations for walnut during 2015-16 are presented in Table 4.23. Amongst major export destinations, Germany stood first with 17.30% share followed by UK (14.36%), Netherlands (11.11%), Egypt (10.75%) and USA (9.66%).

Table 4.23: Top 10 export destinations for walnut (2015-16)

Rank	Country	Value Rs Crore	% to Total
1	Germany	20.40	17.30
2	UK	16.94	14.36
3	Netherland	13.11	11.11
4	Egypt	12.68	10.75
5	USA	11.39	9.66
6	France	9.09	7.71
7	Spain	7.81	6.63
8	Nepal	4.21	3.57
9	Belgium	3.98	3.38
10	Sweden	3.12	2.65
	Total (Incl. others)	**117.92**	**100.00**

Citrus

Citrus comprises many species of economic importance. Citrus mainly includes Lime/lemon, mandarin and sweet orange (mosambi). India holds third position in citrus fruits production. Orange accounts for 50% of all citrus fruits production. In India, during the year 2013-14, area and production under citrus crop was 1077.7 thousand ha and 11147 thousand MT (Table 4.24). The production became almost double in last decade.

Table 4.24 Area, production and productivity of citrus in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	708.2	5932.9	8.4
2005-06	742.3	6139	8.3
2006-07	798	7145	9
2007-08	867	8015	9.2
2008-09	923	8608	9.3
2009-10	987.3	9638	9.8
2010-11	846	7464	8.8
2011-12	915.1	7922.1	8.7
2012-13	1042.5	10089.7	9.7
2013-14	1077.7	11147.1	10.3

Source: NHB

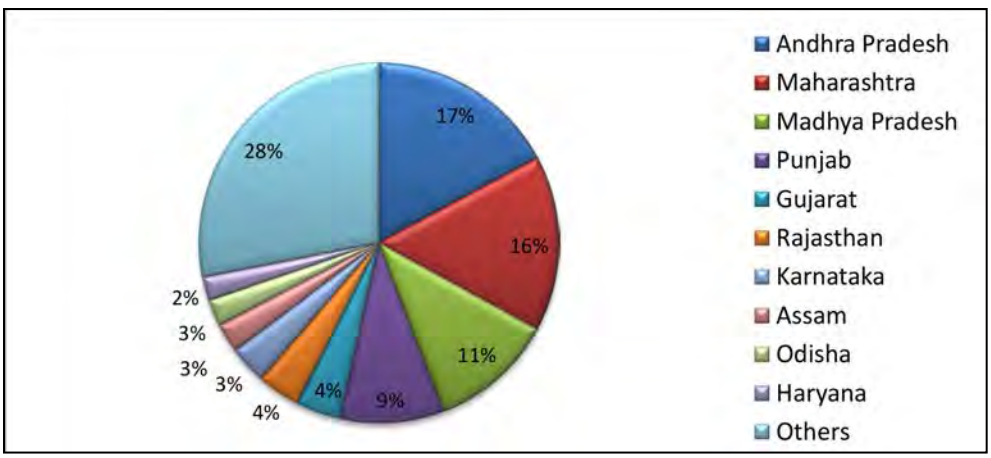


Fig 4.9 Leading citrus producing states in India (2013-14)

In India, Andhra Pradesh top in citrus fruits production (17.16%) followed by Maharashtra (15.79%) and Madhya Pradesh (11.13%) (Fig 4.9).

The data pertaining to the export of citrus fruit (fresh/dried) from India are presented in Table 4.25.

Table 4.25 Export of citrus fruits (fresh/dried) from India

Year	Qty in Tons			Value in Rs Crore		
	Lemons & Limes	Other Citrus	Total	Lemons & Limes	Other Citrus	Total
2006-07	13033	10522	23556	14.04	12.78	26.82
2007-08	16223	9241	25464	15.49	11.12	26.61
2008-09	29494	9896	39390	37.91	10.51	48.42
2009-10	23817	9040	32857	32.12	9.96	42.08
2010-11	28801	6130	34931	34.54	10.44	44.98
2011-12	23510	4820	28329	35.19	9.02	44.21
2012-13	22270	6472	28742	48.57	9.54	58.11
2013-14	19545	5431	24976	52.43	12.51	64.94
2014-15	19033	7074	26107	60.18	13.22	73.4
2015-16	17081	7984	25065	74.07	12.74	86.81
CGR%	**0.66**	**-5.21**	**-1.31**	**16.57****	**1.08**	**12.18****
% to total (2015-16)	**-**	**-**	**-**	**85.32**	**14.68**	**100.00**

*** Significant at 1% level*

This revealed that citrus fruit by quantity did not show any significant growth in export during last decade however by value it grew by 12.18% annually. Citrus export includes lemons and lime and other citrus from which the former contributed 85.32% by value in 2015-16 and reported 16.57% annual growth during last decade.

The detail of major export market for Indian citrus is provided in Table 4.26. UAE alone accounted for 76.42 % share in total citrus export followed by Saudi Arab (12.64%). In case of other citrus, Nepal emerged as a largest market contributing 84.14%.

Table 4.26 Top 10 Export destinations for citrus fruits (fresh/dried) (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Lemons & Limes				**Other Citrus**		
1	U A E	56.60	76.42	**1**	Nepal	10.72	84.14
2	Saudi Arab	9.36	12.64	**2**	Bangladesh	0.71	5.54
3	Maldives	3.52	4.76	**3**	U S A	0.38	2.99
4	Nepal	3.30	4.46	**4**	Russia	0.33	2.57
5	Kuwait	0.48	0.64	**5**	Kuwait	0.15	1.16
6	Baharain	0.35	0.48	**6**	Canada	0.13	1.03
7	Korea	0.12	0.16	**7**	U K	0.09	0.72
8	Pakistan	0.07	0.10	**8**	U A E	0.09	0.68
9	Singapore	0.07	0.09	**9**	Singapore	0.04	0.30
10	Qatar	0.06	0.08	**10**	Korea	0.04	0.28
Total (Incl. others)		**74.07**	**100.00**	**Total (Incl. others)**		**12.74**	**100.00**

Export quality specifications for Citrus fruits are presented in table 4.27. Quality parameters vary from country to country.

Table 4.27 Export specifications for citrus fruits

Mandarin		
Particulars	**Variety**	**Middle East**
Size/Weight/ Colour	Nagpur Mandarin	Colour : Light orange, Weight : 150-175 g Grades : 65-70 mm & 40-45 mm
Packing		65 mm grade – 7 kg 40 mm grade – 2.5 kg
Storage		5-7 ° C
Transport		By Sea
Lime		
Particulars	**Variety**	**Middle East**
Size/Weight/ Colour	Local	20-25 mm, Colour: Green
Packing		5 Kg gunny bags, 20 kg wooden boxes
Storage		5-7 ° C
Transport		By Sea

Melon (fresh)

Watermelon is mainly used as fresh, however it is also used in many versatile preparations such as jelly and sharbat. In India, during the year 2013-14, the area and production of watermelon was 74.64 thousand ha and 1809.83 thousand MT, whereas it was 36.70 thousand ha and 760.81 thousand MT for Muskmelon.

The major producing states of watermelon in India are given in Fig 4.10, which shows that Uttar Pradesh (24.67%), Karnataka (17.53%), Tamil Nadu (12.49%), Odisha (13.42%) and Andhra Pradesh (8.10%) are the five major producing states in the country.

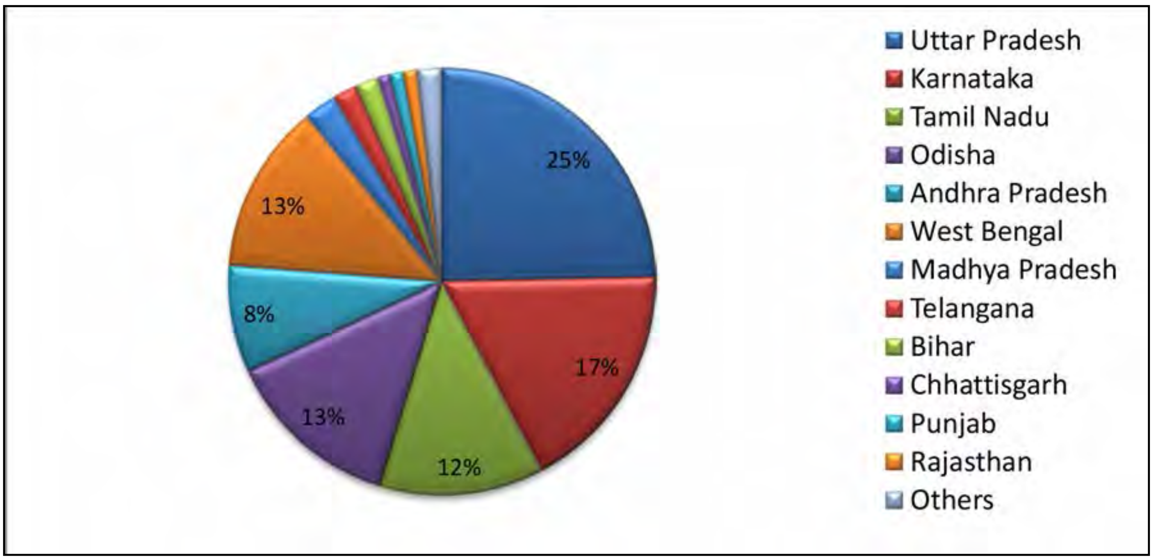


Fig 4.10 Leading watermelon producing states in India (2013-14)

The growth in export of melon (fresh) from India by quantity and value is given in Table 4.28. The group comprises of watermelons as well as other melons. The data showed that the export of water-melon in terms of quantity grew by 10.87% annually and export of other melon also increased even at a higher rate of 17.33% making overall export of Indian melon to rise by 11.77% during last decade. Further, water-melon occupied 67.61% share in total export of melon (fresh) from India by value in 2015-16.

Table 4.28 Export of melon (fresh) from India

Year	Qty in Tons			Value in Rs Crore		
	Water-melons	Other Melons	Total	Water-melons	Other Melons	Total
2006-07	7929	674	8603	6.67	0.83	7.5
2007-08	6619	845	7464	5.08	0.72	5.8
2008-09	9774	1184	10958	9.03	1.45	10.48
2009-10	11855	1721	13575	14.45	2.21	16.66
2010-11	11289	1210	12500	14.49	1.95	16.44
2011-12	17760	1877	19637	21.67	3.27	24.94
2012-13	18724	1644	20369	22.42	2.66	25.08
2013-14	14163	1662	15824	29.16	5.65	34.81
2014-15	15234	2587	17821	36.91	11.7	48.61
2015-16	20196	5422	25618	54.46	26.09	80.55
CGR%	**10.87****	**17.33****	**11.77****	**24.46****	**35.41****	**26.6****
% to total (2015-16)	**-**	**-**	**-**	**67.61**	**32.39**	**100.00**

*** Significant at 1% level*

Major export destinations for Indian melon (fresh) are depicted in Table 4.29. UAE emerged as the largest export market for both Indian water-melon and Indian other melon contributing 73.57 and 81.41% share in total export in total export value of melon, respectively.

Table 4.29 Top 10 export destinations for melon (fresh) (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Watermelons				**Other Melons**		
1	U A E	40.06	73.57	**1**	U A E	21.24	81.41
2	Maldives	3.57	6.55	**2**	Qatar	1.48	5.68
3	Nepal	3.32	6.09	**3**	Netherland	0.87	3.33
4	Netherland	2.98	5.46	**4**	Bahrain	0.57	2.19
5	Qatar	1.81	3.32	**5**	Kuwait	0.54	2.07
6	Germany	1.09	2.01	**6**	Oman	0.48	1.83
7	Bahrain	0.77	1.42	**7**	Saudi Arabia	0.29	1.11
8	Oman	0.26	0.48	**8**	Germany	0.23	0.89
9	U K	0.24	0.45	**9**	Canada	0.10	0.38
10	Canada	0.18	0.33	**10**	U K	0.09	0.33
Total (Incl. others)		**54.46**	**100.00**	**Total (Incl. others)**		**26.09**	**100.00**

Papaya

Papaya is a tropical fruit having commercial importance because of its high nutritive and medicinal value. During the year 2013-14, area and production under papaya was 133.4 thousand ha and 5639.3 thousand MT (Table 4.30). Production under Papaya crop became almost double during the last decade. In India, papaya is mostly cultivated in the states of Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh and West Bengal. Top producing states of papaya are: Andhra Pradesh (27.39%), Gujarat (21.02%), Karnataka (8.43%), Madhya Pradesh (7.69%) and West Bengal (5.94%) (Figure 4.11).

Table 4.30 Area, production and productivity of papaya in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	73.8	2535.1	34.4
2005-06	67.8	2139.3	31.6
2006-07	72	2482	34.5
2007-08	83	2909	35
2008-09	98	3629	37
2009-10	95.7	3913.5	40.9
2010-11	106	4196	39.6
2011-12	117.4	4457.1	38
2012-13	132.2	5381.7	40.7
2013-14	133.4	5639.3	42.3

Source: NHB

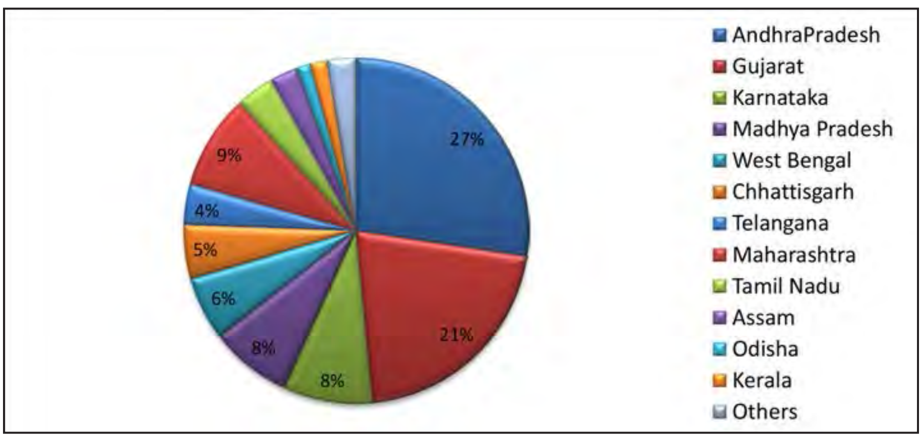


Fig 4.11 Leading papaya producing states in India (2013-14)

Export of papaya (fresh/dried) from India is presented in Table 4.31. It was found that though the export of papaya by quantity did not show any significant rise during the study period, but by value it increased from Rs 11.60 crore in 2006-07 to Rs 56.78 crore in 2015-16 with a rise of 17.19 % per annum.

Table 4.31 Export of papaya (fresh/dried) from India

Year	Qty in Tons	Value in Rs Crore
2006-07	10344	11.60
2007-08	10880	11.23
2008-09	13834	18.10
2009-10	17925	17.49
2010-11	17176	19.31
2011-12	18672	24.75
2012-13	16491	33.29
2013-14	9922	35.11
2014-15	11485	38.26
2015-16	13181	56.78
CGR%	**0.44**	**17.19****

*** Significant at 1% level*

Top 10 export destinations for papaya during the year 2015-16 are given in Table 4.32. UAE emerged as the largest export destination for Indian papaya contributing 46.32 % share in total papaya export followed by Saudi Arab (18.80%), Netherland (12.08%), Qatar (6.20%) and Bahrain (5.27%).

Table 4.32 Top 10 Export destinations for papaya (fresh/dried) (2015-16)

Rank	Country	Value Rs Crore	% to Total
1	UAE	26.30	46.32
2	Saudi Arab	10.67	18.80
3	Netherland	6.86	12.08
4	Qatar	3.52	6.20
5	Bahrain	2.99	5.27
6	Kuwait	2.31	4.08
7	Oman	1.42	2.50
8	Nepal	1.25	2.21
9	Germany	0.70	1.23
10	Norway	0.19	0.33
	Total (Incl. others)	**56.78**	**100.00**

Export quality specifications for Papaya are presented in table 4.33. Quality parameters vary from country to country.

Table 4.33 Export specifications for papaya

Particulars	Variety	Middle East	Europe
Size/Weight/ Colour	Taiwan 785	Pale Green, 1-1.25 kg/fruit	---
	Taiwan 786	Pale Green, 1-1.25 kg/fruit	---
	Solo	----	400-500 g/fruit
Packing		8 kg	5 kg
Storage Temp.		10-13 °C	10-13 °C
Transport		By Sea	By Sea

Guava

It is the fifth most important fruit after mango, banana, apple and citrus in India. Guava fruits are used for both, fresh consumption as well as for processing. Guava is exported in fresh/dried form as well as in form of Jams/ Jellies/ Marmalades. During the year 2013-14, area and production was 268.2 thousand ha and 3667.9 thousand MT in the country. In the recent decade, production became almost double in this crop.

Table 4.34 Area, production and productivity of guava in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	161	1682.8	10.5
2005-06	166.5	1736.6	10.4
2006-07	176	1831	10.4
2007-08	179	1981	11.1
2008-09	204	2270	11.1
2009-10	219.7	2571.5	11.7
2010-11	205	2462	12.0
2011-12	219.9	2510.4	11.4
2012-13	235.6	3198.3	13.6
2013-14	268.2	3667.9	13.7

Source: NHB

The leading producing states of Guava in the country are: Madhya Pradesh (22.93%), Uttar Pradesh (16.50%) and Bihar (10.19%).

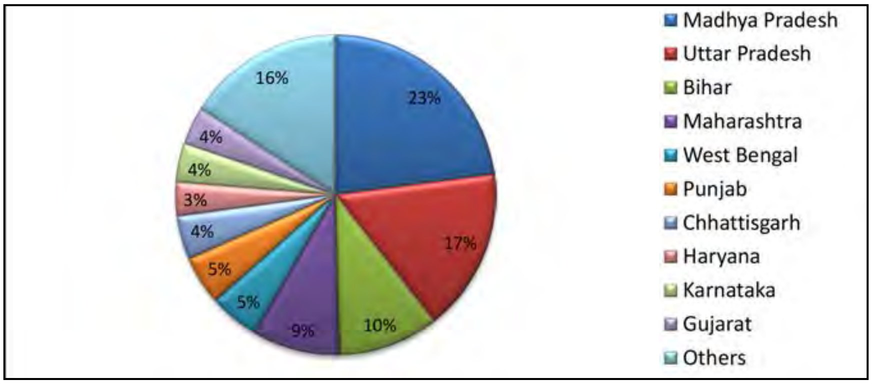


Fig 4.12 Leading guava producing states in India (2013-14)

The growth in export of guava both in terms of quantity and value is presented in Table 4.35. The data revealed that no significant change was observed in terms of quantity but in terms of value it increased from Rs 14.58 crore in 2006-07 to Rs 33.32 crore in 2015-16 indicating 6.23% annual compound growth over the period. The guava is exported mainly in Jams/Jellies/ Marmalades form contributing 78.63% and rest in fresh/dried form.

Table 4.35 Export of guava from India

Year	Qty in Tons			Value in Rs Crore		
	Fresh/ Dried	Jams/ Jellies Marmalades	Total	Fresh/ Dried	Jams/ Jellies/ Marmalades	Total
2006-07	3393	2717	6110	7.73	6.85	14.58
2007-08	2496	5664	8159	4.17	12.4	16.57
2008-09	1691	5471	7163	3.04	15.94	18.98
2009-10	516	5434	5950	1.13	15.37	16.5
2010-11	301	5225	5525	0.62	12.75	13.37
2011-12	1382	4156	5538	3.18	13.71	16.89
2012-13	1180	4570	5749	3.51	16.06	19.57
2013-14	970	3487	4457	4.15	18.1	22.25
2014-15	908	3386	4294	3.72	16.25	19.97
2015-16	1905	5399	7304	7.12	26.2	33.32
CGR%	**-6.7**	**-0.25**	**-3.25**	**3.06**	**8.97****	**6.23***
% to total (2015-16)	**-**	**-**	**-**	**21.37**	**78.63**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Top 10 export markets for Indian guava in the year 2015-16 are presented in Table 4.36. Saudi Arab emerged as the largest export market for fresh/dried guava with 44.40% share followed by Nepal (21.64%) and UAE (13.70%). Whereas Indonesia, Netherland, UK and Yemen were emerged as top export destination for Jams/ Jellies/ Marmalades accounting 20.34, 16.84, 12.82 and 10.98% share, respectively.

Table 4.36 Top 10 export destinations for guava (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Fresh/ Dried				**Jams/ Jellies/ Marmalades**		
1	Saudi Arab	3.16	44.40	**1**	Indonesia	5.33	20.34
2	Nepal	1.54	21.64	**2**	Netherland	4.41	16.84
3	U A E	0.98	13.70	**3**	U K	3.36	12.82
4	Oman	0.33	4.70	**4**	Yemen Rep	2.88	10.98
5	Tanzania	0.24	3.35	**5**	U A E	1.43	5.47
6	Baharain	0.23	3.29	**6**	Algeria	1.30	4.97
7	Qatar	0.20	2.78	**7**	South Africa	1.24	4.75
8	Canada	0.12	1.72	**8**	Saudi Arab	1.03	3.94
9	Maldives	0.12	1.71	**9**	Malaysia	0.81	3.08
10	Kuwait	0.08	1.11	**10**	U S A	0.71	2.72
Total (Incl. others)		**7.12**	**100.00**	**Total (Incl. others)**		**26.20**	**100.00**

Sapota

Sapota commonly called chiku is an important fruits of India. Karnataka (26.25% of the total), Gujarat (20.39%), Tamil Nadu (19.97%), Andhra Pradesh (17.15%) and Maharashtra (9.42%) are the leading producing states of sapota (Fig 4.13). In India, during the year 2013-14, the area and production was 177 thousand ha and 1744.3 thousand MT (Table 4.37).

The export of sapota (fresh) from India by quantity and value is given in Table 4.38. The data shows that the export of sapota in terms of quantity declined by 9.99% annually during last decade.

Table 4.37 Area, production and productivity of sapota in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	134.1	1076.5	8
2005-06	139.7	1114	8
2006-07	149	1216	8.2
2007-08	152	1258	8.3
2008-09	156	1308	8.4
2009-10	158.9	1346.8	8.5
2010-11	160	1424	8.9
2011-12	163.4	1425.8	8.7
2012-13	163.9	1495	9.1
2013-14	177	1744.3	9.9

Source: NHB

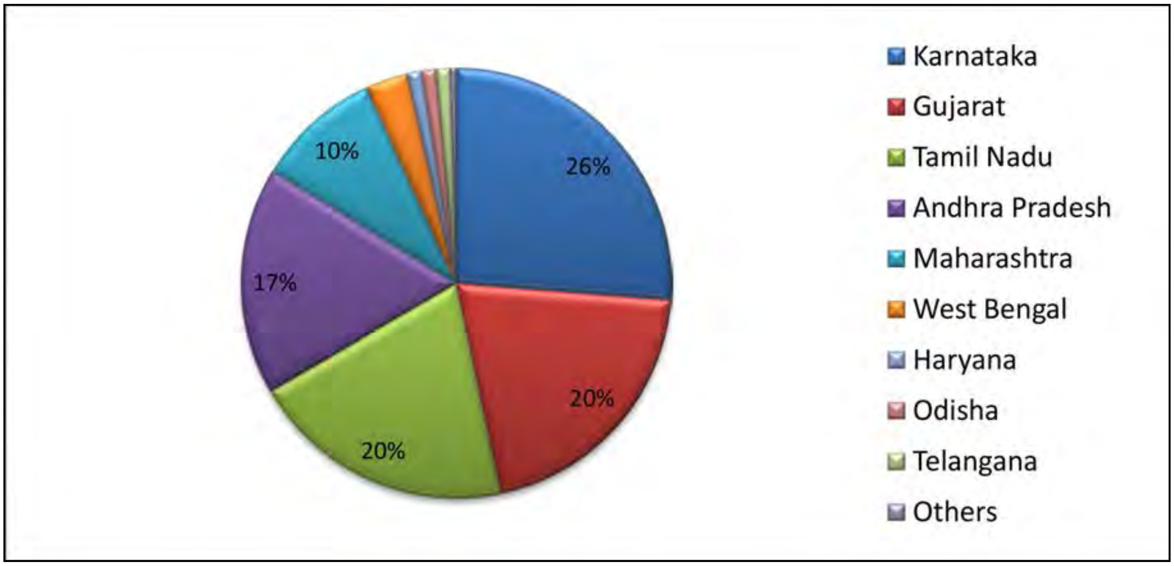


Fig 4.13 Leading sapota producing states in India (2013-14)

Table 4.39 shows top export destinations for Indian sapota. UAE was the largest export market for Indian sapota which accounted for 49.38% market share followed by Baharain (19.61%) and Quatar (6.29%).

Table 4.38 Export of sapota (fresh) from India

Year	Qty in Tons	Value in Rs Crore
2006-07	2090	7.44
2007-08	2151	5.04
2008-09	4112	6.08
2009-10	4198	5.05
2010-11	2081	3.67
2011-12	2694	4.28
2012-13	2606	6.15
2013-14	1429	7.71
2014-15	1372	8.18
2015-16	973	9.67
CGR%	**-9.99***	**4.66**

** Significant at 5% level*

Table 4.39 Top 10 export destinations for sapota (fresh) (2015-16)

Rank	Country	Value Rs Crore	% to Total
1	U A E	4.78	49.38
2	Baharain	1.90	19.61
3	Qatar	0.61	6.29
4	U K	0.56	5.81
5	Saudi Arab	0.44	4.52
6	Canada	0.41	4.26
7	Oman	0.41	4.20
8	Kuwait	0.18	1.90
9	Singapore	0.18	1.84
10	U S A	0.11	1.16
Total (Incl. others)		**9.67**	**100.00**

Export quality specifications for Sapota are presented in table 4.40. Quality parameters vary from country to country.

Table 4.40 Export specifications for Sapota

Particulars	Variety	Middle East
Size/Weight/ Colour	Cricket ball, Kalipatti	-
Packing		3 kg
Storage		15-20°C
Transport		By Sea

Chapter 5

Export of vegetables from India

5.1 Area, production and productivity of vegetables

Vegetables are important constituents of Indian agriculture and nutritional security due to their short duration, high yield, nutritional richness, economic viability and ability to generate on-farm and off-farm employment. Our country is blessed with diverse agro-climates with distinct seasons, making it possible to grow wide array of vegetables. It ranks second in vegetables production in the world, after China. India produces nearly 11 per cent of the world's vegetables. As per National Horticulture Database, India is producing 169.48 million metric tonnes of vegetables from 9.54 million hectares during 2014-15 (NHB, 2016). Fruits and vegetables together contribute about 92% of the total horticultural production in the country.

Table 5.1 Area, production and productivity of vegetables in India

Year	Area ('000ha)	Production ('000 MT)	Productivity (MT/ha)
1991-92	5593	58532	10.0
2001-02	6156	88622	10.7
2002-03	6092	84815	11.9
2003-04	6082	88334	9.9
2004-05	6744	101246	10.1
2005-06	7213	111399	10.4
2006-07	7581	114993	10.7
2007-08	7848	128449	11.2
2008-09	7981	129077	11.2
2009-10	7985	133738	11.3
2010-11	8495	146554	11.7
2011-12	8989	156325	11.4
2012-13	9205	162187	11.6
2013-14	9396	162897	12.3
% share to horticultural crops (2013-14)	**38.83**	**58.73**	

Source: Department of Agriculture, Cooperation and Farmers Welfare,GoI

The production share of vegetables was 58.73 per cent among all horticultural crops, during the year 2013-14. The production of vegetable crops became more than double in the last recent 14 years from 89 million MT to 162.9 million MT. During the year 2013-14, the area and production under vegetable crops was 9.40 million ha and 162.90 million MT, respectively.

Amongst vegetables, India is the largest producer of ginger and okra and ranks second in production of potato, onion, cauliflower, brinjal, cabbage, *etc*. The vast production base offers India tremendous opportunities for export.

Potato (25.51%), tomato (11.91%), onion (11.50%) and Brinjal (8.32%) are the four major vegetables contributing 57% of total vegetable production in our country. Other important vegetables are cabbage (5.55%), cauliflower (5.26%), tapioca (5.0%), okra (3.9%) and peas (2.4%).

Table 5.2 Area and production of vegetables in India (2013-14)

Fruits	Area			Production		
	'000 ha	% share	Rank	'000 MT	%	Rank
Potato	1973	21.00	1	41555	25.51	1
Tomato	1204	12.81	2	19402	11.91	2
Onion	882	9.39	3	18736	11.50	3
Brinjal	711	7.57	4	13558	8.32	4
Tapioca	228	2.43	8	8139	5.00	7
Cabbage	400	4.26	7	9039	5.55	5
Cauliflower	434	4.62	6	8573	5.26	6
Okra	533	5.67	5	6346	3.90	8
Peas	434	4.62	6	3869	2.38	9
Sweet potato	106	1.13	9	1088	0.67	10
Others	2492	26.52	10	32591	20.01	11
Total	**9396**	**100.00**	**-**	**162897**	**100**	**-**

Source: NHB

The major producing states in the country are West Bengal, Uttar Pradesh, Bihar, Madhya Pradesh, Gujarat, Maharashtra, Odisha, Tamil Nadu, Andhra Pradesh, Karnataka and others. West Bengal ranks first in terms of area and production under vegetables in India followed by Uttar Pradesh and Bihar. Gujarat State ranks 6th in terms of area (6.20% share to India's area) and 5th in terms of production (7.10% share to India's production), during the year 2013-14.

Table 5.3 Major vegetables producing states in India (2013-14)

States	Area ('000ha)	Production ('000 MT)
West Bengal	1380.3	23045
Uttar Pradesh	859.4	18545
Bihar	809.8	15097.8
Madhya Pradesh	628.7	13019.3
Gujarat	582.3	11571.2
Maharashtra	726	10161.8
Odisha	677.3	9433.7
Tamil Nadu	289.7	8678.8
Andhra Pradesh	439.6	8149.8
Karnataka	418.7	7500.7
Others	2584.2	37693.8

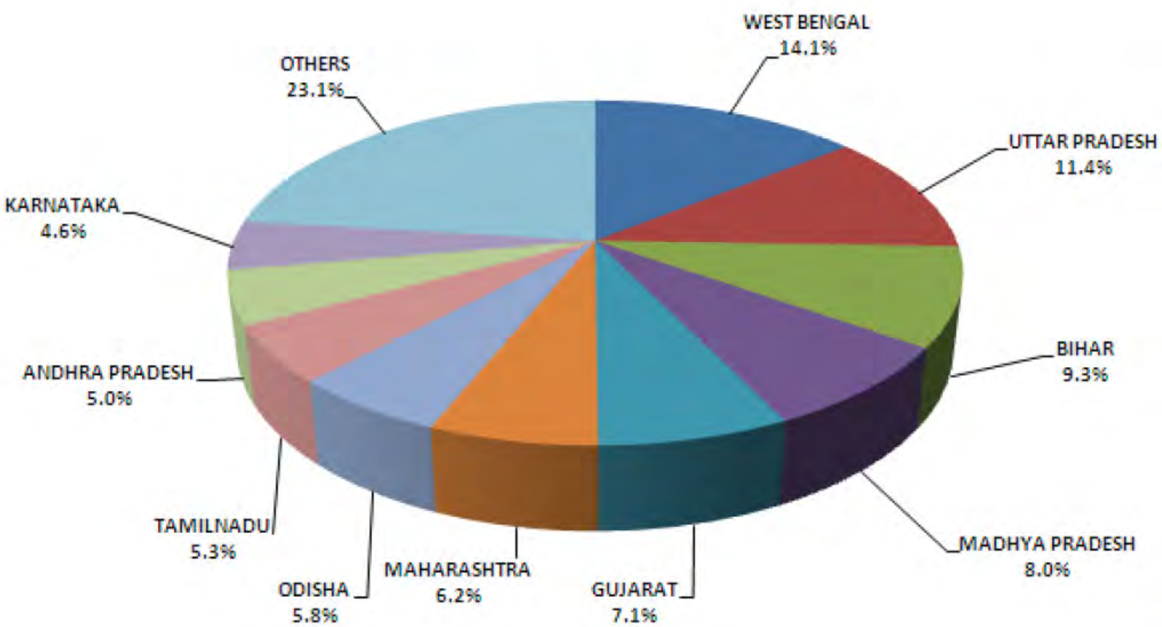


Fig 5.1 Leading vegetables producing states in India (2013-14)

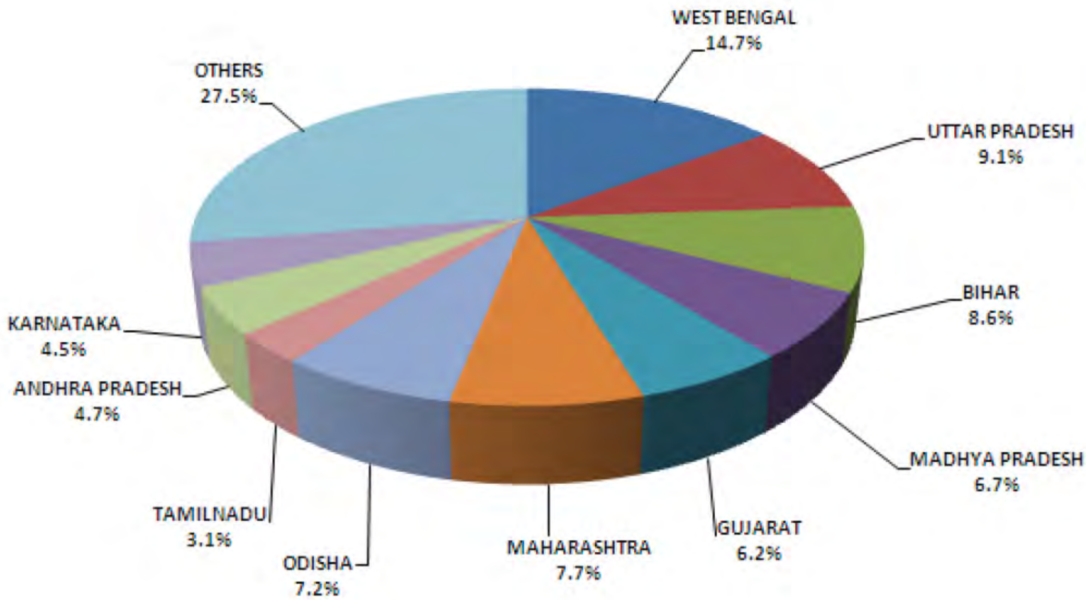


Fig 5.2 Leading vegetables growing states in India (2013-14)

During the year 2014-15, area and production in Gujarat state, under vegetables was 0.60 million ha and 12.05 MT respectively. Amongst all vegetables, Potato ranks first in area with 16.23% share and production with 25.71% share.

Table 5.4 Area and production of vegetables in Gujarat (2014-15)

Sr. No.	Vegetables	Area (ha)	% to Total	Prod (MT)	% to Total
1	Potato	98200	16.23	3097391	25.71
2	Cucurbits	81356	13.45	1275094	10.58
3	Brinjal	74014	12.23	1469646	12.20
4	Okra	73843	12.21	857486	7.12
5	Tomato	46228	7.64	1313701	10.90
6	Onion	44500	7.36	1126590	9.35
7	Cluster bean	41752	6.90	421304	3.50
8	Cow Pea	30470	5.04	322084	2.67
9	Cabbage	30029	4.96	654522	5.43
10	Cauliflower	24890	4.11	540954	4.49
11	Other	59684	9.87	970477	8.05
	Total	**604966**	**100.00**	**12049249**	**100.00**

Source: Agriculture and Cooperation Department, GoG

5.2 Product-wise export of major vegetables

The product-wise export of major vegetables during the year 2015-16 is presented in Table 5.5 and Fig 5.3. It shows that onion ranked first with Rs 3478.17 crore contributing 51.30% in the total export of vegetables followed by cucumbers & gherkins (14.77%), tomato (6.09%), potato (5.71%), chilli (2.61%), Garlic (2.20%).

Table 5.5 Product-wise export of major vegetables (2015-16)

Rank	Crop	Product	Value in Rs Crore		% share
1	**Onion**	Fresh/Chilled	2747.41	**3478.17**	51.30
		Dried/Sliced/Broken/Powder	730.76		
2	**Cucumbers & Gherkin**	Fresh/Chilled	2.09	**1001.26**	14.77
		Provisionally Preserved	365.90		
		Prepared/Preserved	633.27		
3	**Tomato**	Fresh/Chilled	377.73	**412.94**	6.09
		Whole Or In Pieces	0.80		
		Prepared/Preserved, /Pieces	1.01		
		Ketchup & Sauces	33.40		
4	**Potato**	Seeds, Fresh/Chilled	4.80	**387.38**	5.71
		Other Than Seed, Fresh/Chilled	320.16		
		Prepared/Preserved, Frozen,	46.85		
		Prepared/Preserved, Not Frozen	15.57		
5	**Chilli**	Green Chilli Fresh/Chilled	171.07	**177.22**	2.61
		Sauce	6.14		
6	**Garlic**	Fresh/Chilled	73.17	**149.45**	2.20
		Dehydrated Powder	41.26		
		Dehydrated Flakes	28.05		
		Dried	6.97		
7	**Sweet Corn**	Frozen	53.48	**69.47**	1.02
		Prepared/ Preserved, Not Frozen	15.99		
8	**Peas**	Shelled/Unshelled, Fresh/ Chilled	5.19	**22.75**	0.34
		Shelled/Unshelled, Frozen	17.56		
	Other	-	-	**1081.36**	15.95
		Total	-	**6780.00**	100.00

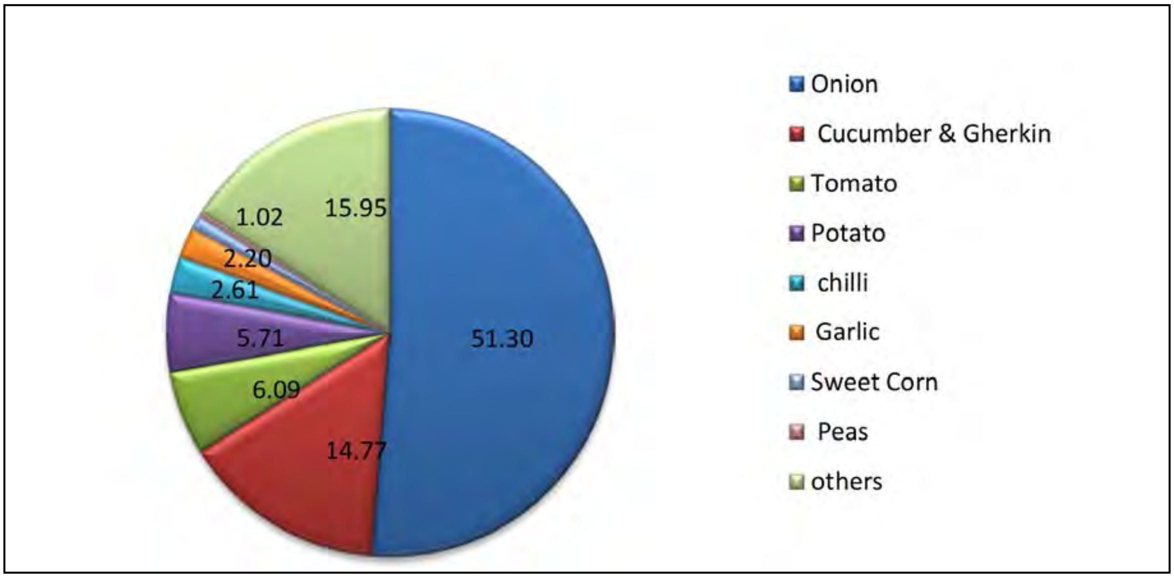


Fig 5.3 Commodity-wise share (%) in total export of vegetables (2015-16)

5.3 Major vegetables

Onion

The onion is one of the oldest vegetables known to mankind and is used in an array of recipes and preparations. However, it's rarely eaten on its own and is usually an accompaniment to the main course. India is the second largest onion growing country in the world. Indian onions are famous for their pungency and are available round the year. In India, during the year 2013-14, the area was 1203.6 thousand ha and production was 19.4 million MT, respectivly. Area and production became double in last recent decade in the country. There are certain varieties in yellow onion which are suitable for export in European countries.

Table 5.6 Area, production and productivity of onion in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	613.8	7760.6	12.6
2005-06	703.6	9432.5	13.4
2006-07	768	10847	14.1
2007-08	821	13900	16.9
2008-09	834	13565	16.3
2009-10	756.2	12158.8	16.1
2010-11	1064	15118	14.2
2011-12	1087.2	17511.1	16.1
2012-13	1051.5	16813	16
2013-14	1203.6	19401.7	16.1

Source: NHB

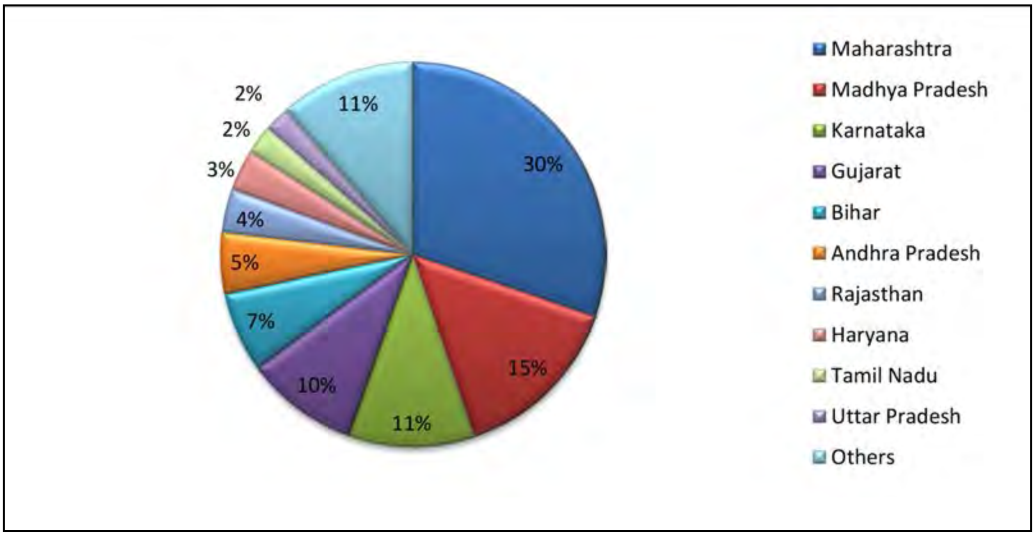


Fig 5.4 Leading onion producing states in India (2013-14)

The major onion producing states in India are Maharashtra (30.22%), Madhya Pradesh (14.56%), Karnataka (10.64%), Gujarat (9.54%) and Bihar (6.72%). Maharashtra, Madhya Pradesh and Karnataka together contribute more than 50% to the country's total production (2013-14).

Export of onion from India is given in Table 5.7. It was observed that onion export by quantity did not show any significant growth during last decade. This is might be due to frequent and sudden imposed of Minimum Export Price (MEM) by the Government to control export of onion.

The export of onion by its value increased from Rs 1320.66 crore in 2006-07 to Rs 3478.17 crore in 2015-16 showing 10.72% rise per annum during last decade. Further, it was noticed that fresh/chilled onion accounted for major share (78.99%) in total onion export and the rest was in processed *i.e.* dried/cut/sliced/powder form. Both the categories *viz.*, fresh/chilled and processed by value showed significant growth of 9.42 and 18.18%, respectively during last decade.

Table 5.7 Export of onion from India

Year	Qty in Tons			Value in Rs Crore		
	Fresh/ Chilled	Dried / Cut/ Sliced/ Powder	Total	Fresh/ Chilled	Dried/ Cut/ Sliced/ Powder	Total
2006-07	1378373	24182	1402555	1163.31	157.35	1320.66
2007-08	1008606	59134	1067741	1035.78	230.41	1266.19
2008-09	1670186	27476	1697662	1827.52	143.17	1970.69
2009-10	1664922	28964	1693886	2319.43	238.65	2558.08
2010-11	1182324	38337	1220661	1779.29	287.49	2066.78
2011-12	1309925	56089	1366014	1723.00	388.00	2111.00
2012-13	1666873	51516	1718389	1966.63	458.00	2424.63
2013-14	1482499	40884	1523383	3169.61	509.85	3679.46
2014-15	1238103	52976	1291078	2300.54	679.07	2979.61
2015-16	1201245	53647	1254892	2747.41	730.76	3478.17
CGR%	**-0.18**	**6.36**	**-0.03**	**9.42****	**18.18****	**10.72****
% to total (2015-16)	**-**	**-**	**-**	**78.99**	**21.01**	**100.00**

*** Significant at 1% level*

Top export destinations for Indian onion are presented in Table 5.8. It was found that in case of fresh/chilled onion export, Bangladesh ranked top with 22.71% share followed by Malaysia (21.34%), Sri Lanka (16.35%) and UAE (11.91%) whereas in case of processed onion export, Germany ranked top with 13.77% share followed by UK (12.72%) and USA (8.90%).

Table 5.8 Top 10 export destinations for onion (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Fresh/ Chilled				**Dried, Whole/ Cut/ Sliced/ Powder**		
1	Bangladesh	623.84	22.71	**1**	Germany	100.63	13.77
2	Malaysia	586.42	21.34	**2**	U K	92.99	12.72
3	Sri Lanka	449.27	16.35	**3**	U S A	65.06	8.90
4	U A E	327.28	11.91	**4**	Russia	52.35	7.16
5	Nepal	173.38	6.31	**5**	Belgium	47.38	6.48
6	Philippines	75.66	2.75	**6**	Brazil	38.52	5.27
7	Qatar	69.11	2.52	**7**	Poland	33.45	4.58
8	Kuwait	66.52	2.42	**8**	Spain	24.91	3.41
9	Singapore	55.83	2.03	**9**	South Africa	22.27	3.05
10	Vietnam	52.20	1.90	**10**	Netherland	17.67	2.42
Total (Incl. other)		**2747.41**	100.00	**Total (Incl. other)**		**730.76**	100.00

Cucumber and Gherkin

The cucumber is a multipurpose vegetable because of wide range of uses from salads to pickles and digestive aids to beauty products. The caloric and nutritional value of cucumber is very low but it is a primary source of vitamins, minerals and fibre for human body. During the year 2013-14, area and production of cucumber was 43.28 thousand ha and 678.15 thousand MT, respectivly in the country.

Andhra Pradesh contributes 23.27% to the India’s production followed by Karnataka (15.87%) and Telangana (11.61%). These three states are contributing half of the India’s total production. Other producing states are Assam, Jammu & Kashmir, Odisha, Punjab, Madhya Pradesh, Jharkhand, Bihar and others (2013-14).

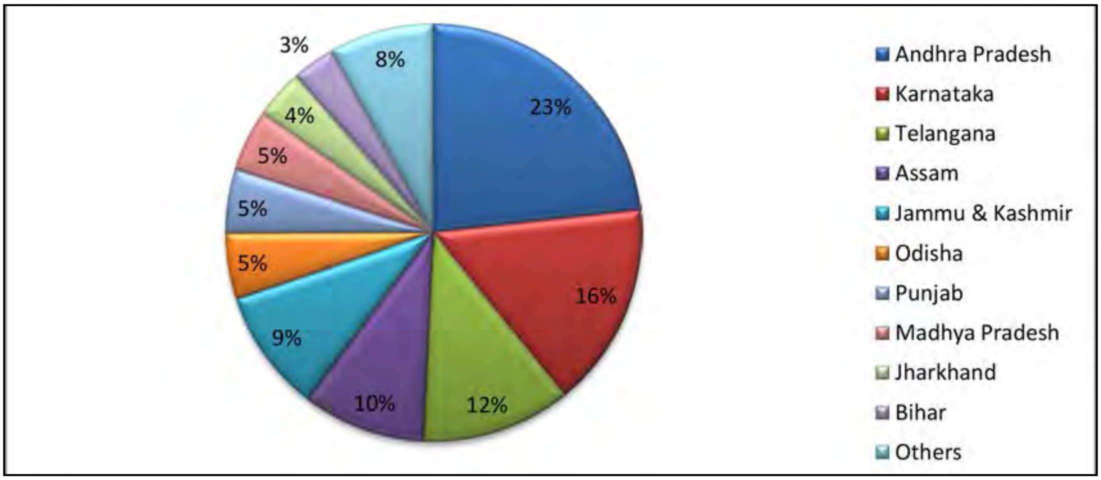


Fig 5.5 Leading cucumber producing states in India (2013-14)

Export of cucumber and gherkin from India is given in Table 5.9.

Table 5.9 Export of cucumber and gherkin from India

Year	Qty in Tons			Value in Rs Crore		
	Provisionally Preserved	Prepared/ Preserved	Total	Provisionally Preserved	Prepared/ Preserved	Total
2006-07	89509	145216	234725	209.04	293.59	502.63
2007-08	60638	127558	188196	145.43	250.62	396.05
2008-09	108081	191910	299992	302.07	487.10	789.17
2009-10	88465	174843	263308	245.16	496.19	741.35
2010-11	59534	149698	209232	139.11	376.15	515.26
2011-12	73709	184894	258603	202.89	542.14	745.03
2012-13	65003	173622	238625	233.24	623.35	856.59
2013-14	51608	167142	218750	241.35	713.86	955.21
2014-15	87432	163751	251183	428.38	774.04	1202.42
2015-16	75412	127514	202926	365.90	633.27	999.17
CGR%	**-2.05**	**0.05**	**-0.61**	**7.09**	**10.77****	**9.49****
% to total (2015-16)	**-**	**-**	**-**	**36.62**	**63.38**	**100.00**

*** Significant at 1% level*

Cucumber and gherkin occupied the second rank in vegetables export from India. It is mainly exported as preserved as well as provisionally preserved. By quantity, none of these categories reported any significant change in last decade. Whereas in terms of value, only preserved category reported significant growth of 10.77 per cent per annum. Overall export of cucumber and gherkin by value reported 9.49% growth per annum. Further, it was noticed that during the year 2015-16, preserved category occupied the larger share (63.38%) in total export of cucumber and gherkin from India as compared to provisionally preserved (36.62%).

Top 10 export destinations for Indian cucumber and gherkin are presented in Table 5.10. It was found that in case of provisionally preserved category, USA ranked top with 23.53% share followed by Belgium (15.42%), Spain (14.29%), France (14.16%) and Russia (13.53%). Whereas in case of preserved category, USA ranked top with 25.04% share followed by Russia (11.02%), Germany (10.43%) and Canada (10.18%).

Table 5.10 Top 10 Export destinations for cucumber and gherkins (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Provisionally Preserved				**Prepared/ Preserved**		
1	U S A	86.08	23.53	**1**	U S A	158.60	25.04
2	Belgium	56.41	15.42	**2**	Russia	69.79	11.02
3	Spain	52.28	14.29	**3**	Germany	66.05	10.43
4	France	51.82	14.16	**4**	Canada	64.45	10.18
5	Russia	49.52	13.53	**5**	Australia	39.04	6.16
6	Iraq	9.34	2.55	**6**	Belgium	37.66	5.95
7	Germany	5.96	1.63	**7**	Netherland	28.67	4.53
8	Italy	5.92	1.62	**8**	U K	26.87	4.24
9	Lithuania	4.92	1.35	**9**	France	24.87	3.93
10	Australia	4.83	1.32	**10**	Spain	19.81	3.13
Total (Incl. other)		**365.90**	100.00	**Total (Incl. other)**		**633.27**	100.00

5.3.3 Tomato

Tomato is one of the most important protective food crops of India. Tomato is rich source of vitamin A and C, potassium, minerals and fibres. Tomatoes are used in the preparation of soup, salad, pickles, ketchup, puree, and sauces and also consumed as a vegetable in many other ways. In India, the area, production and productivity was 882 thousand ha, 18.74 million MT and 21.2 MT/ ha in the year 2013-14, respectivly.

Table 5.11 Area, production and productivity of tomato in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	505.4	8825.4	17.5
2005-06	546.1	9820.4	18
2006-07	596	10055	16.9
2007-08	566	10303	18.2
2008-09	599	11149	18.6
2009-10	634.4	12433.2	19.6
2010-11	865	16826	19.5
2011-12	907.1	18653.3	20.6
2012-13	879.6	18226.6	20.7
2013-14	882	18735.9	21.2

Source: NHB

During the year 2013-14, Andhra Pradesh (17.90%), Karnataka (11.04%), Madhya Pradesh (10.34%), Telangana (7.92%), Odisha (7.40%) and Gujarat (6.72%) are the major tomato producing states in India.

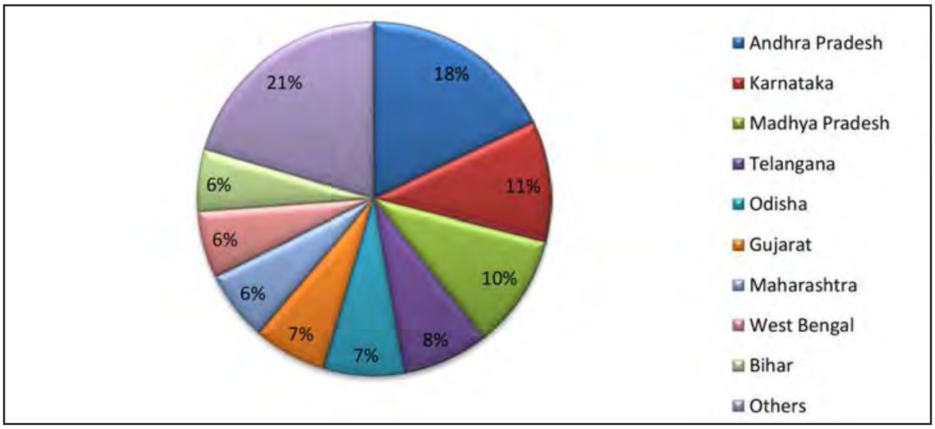


Fig 5.6 Leading tomato producing states in India (2013-14)

Tomato occupied third rank in vegetable exports from India. The data depicted in Table 5.12 shows that export of tomato by quantity as well as by value showed a tremendous growth of 17.14 and 27.13% per annum respectively during last decade. It is mainly exported as fresh/chilled (91.47%) and the rest in processed form. Among the various categories, fresh/chilled and in pieces also showed significant growth of 17.22 and 17.03% per annum by quantity and 27.27 and 20.57% by value, respectively.

Table 5.12 Export of tomato from India

Year	Fresh/ Chilled	In Pieces	Prepared/ Preserved	Ketchup & Sauces	Total
Quantity (in Tons)					
2006-07	33593	135	81	660	34468
2007-08	134845	259	65	1147	136315
2008-09	124617	120	139	1318	126195
2009-10	105862	244	154	1371	107630
2010-11	65872	353	114	8929	75269
2011-12	266986	391	569	2477	270424
2012-13	343692	1272	238	2750	347952
2013-14	426536	616	113	2903	430167
2014-15	217999	1218	775	2729	222721
2015-16	158505	210	190	2907	161812
CGR%	**17.22***	**17.03***	**16.30**	**14.65**	**17.14***
Value (in Rs Crore)					
2006-07	34.10	0.39	0.35	2.40	37.24
2007-08	152.91	0.85	0.35	6.54	160.65
2008-09	127.66	0.40	0.77	8.04	136.87
2009-10	103.25	0.71	1.75	8.61	114.32
2010-11	115.10	1.03	0.81	28.08	145.02
2011-12	470.31	1.10	4.75	16.83	492.99
2012-13	533.05	4.08	1.80	18.03	556.96
2013-14	860.91	2.15	1.99	26.87	891.92
2014-15	444.61	6.08	3.47	33.21	487.37
2015-16	377.73	0.80	1.01	33.40	412.94
CGR%	**27.27****	**20.57***	**19.52***	**25.95****	**27.13****
% to total (2015-16)	**91.47**	**0.19**	**0.24**	**8.09**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Major export destinations for Indian tomato in the year 2015-16 are given in Table 5.13. It was observed that Pakistan and UAE emerged as major export markets for fresh/ chilled tomato contributing 66.80 and 27.76%, respectively. For Ketchup & Sauces, USA (29.92%) and Nepal (23.64%) were found major export destinations.

Table 5.13 Top 10 export destinations for tomato (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Fresh/ Chilled				**Ketchup/ Sauces**		
1	Pakistan	252.33	66.80	**1**	U S A	9.99	29.92
2	U A E	104.86	27.76	**2**	Nepal	7.90	23.64
3	Maldives	6.41	1.70	**3**	Philippines	3.07	9.20
4	Nepal	5.59	1.48	**4**	U K	3.06	9.17
5	Bangladesh	4.56	1.21	**5**	Malaysia	1.73	5.18
6	Oman	2.36	0.62	**6**	Canada	1.14	3.42
7	Saudi Arab	0.99	0.26	**7**	Israel	1.00	3.00
8	Kuwait	0.32	0.09	**8**	Bhutan	0.80	2.41
9	Bhutan	0.14	0.04	**9**	U A E	0.59	1.78
10	Baharain	0.07	0.02	**10**	Sri Lanka	0.51	1.52
Total (Incl. others)		**377.73**	100.00	**Total (Incl. others)**		**33.40**	100.00

Potato

Potato popularly known as ‘The king of vegetables’, has emerged as fourth most important food crop in India after rice, wheat and maize. Potato is grown more than 100 countries in world. In India, potato is cultivated in almost all states and under very diverse agro climatic conditions. About 85 per cent of potatoes are cultivated in Indo-Gangetic plains of North India.

Table 5.14 Area, production and productivity of potato in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	1523.9	28787.7	18.9
2005-06	1569.2	29174.6	18.6
2006-07	1743	28600	16.4
2007-08	1795	34658	19.3
2008-09	1828	34391	18.8
2009-10	1835.3	36577.3	19.9
2010-11	1863	42339	22.7
2011-12	1907	41482.8	21.8
2012-13	1992.2	45343.6	22.8
2013-14	1973.2	41555.4	21.1

Source: NHB

Potato is cultivated in 1.97 million ha area with 41.56 million MT production in the country during the year 2013-14.

The states of Uttar Pradesh, West Bengal, Bihar Gujarat and Madhya Pradesh accounted for more than 80 per cent share in total production. Uttar Pradesh, contributes 31.89% share and West Bengal contributes 22.72% to the total production of the country.

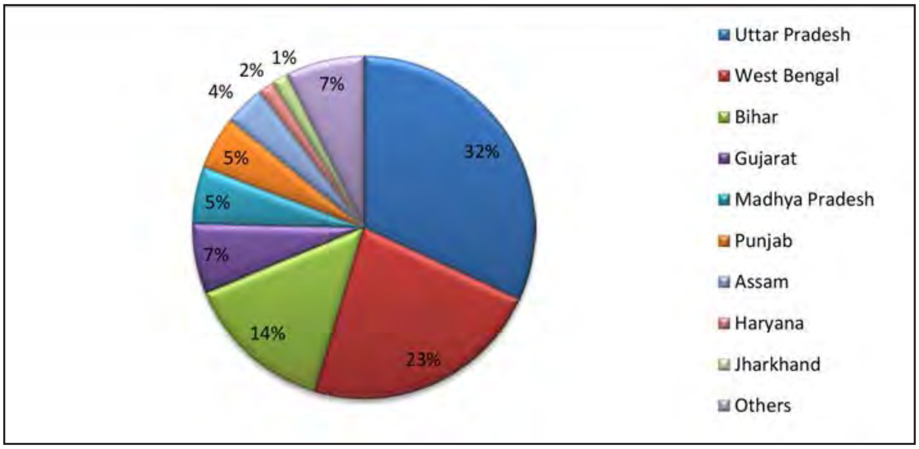


Fig 5.7 Leading potato producing states in India (2014-15)

Potato is exported in various forms *viz.*, fresh/chilled, prepared/preserved (frozen), prepared/preserved (not frozen) and potato seeds. The growth in export of potato from India by quantity and value was worked out and presented in Table 5.15.

Potato emerged as fourth largest exported Indian vegetables. Like tomato, potato also reported a remarkable growth by quantity as well as by value during last decade. Export of potato from India increased from 94240 tons in 2006-07 to 260978 tons in the year 2015-16 with 13.38% growth per annum. In terms of value, it increased from Rs 71.13 crore to Rs 387.38 crore with 24.59% annual growth during the same period.

Amongst various categories, fresh/chilled and prepared/preserved (frozen) showed positive and significant growth by quantity, whereas other two did not show significant change during last decade. By value, all categories except seeds reported positive and significant growth.

Top 10 export destinations for Indian potato (fresh) as well as processed are given in Table 5.16. It shows that Nepal emerged as largest export market for fresh as well as prepared/ preserved (not frozen) potato contributing 52.23% and 82.60% of their respective total exports. For prepared/preserved (frozen) category, Pakistan was the largest export market contributing 54.96%. Egypt emerged as the major market for potato seeds with 49.26% share during 2015-16.

Table 5.15 Export of potato from India

Year	Fresh/ Chilled	Preserved Frozen	Preserved Not Frozen	Potato Seeds	Total
Quantity (in Tons)					
2006-07	89025	758	1298	3159	94240
2007-08	78451	382	1567	3176	83576
2008-09	184961	941	143	11429	197473
2009-10	94088	1671	295	2311	98365
2010-11	185953	135	152	12109	198348
2011-12	193086	1119	336	5669	200209
2012-13	163186	1640	582	1843	167253
2013-14	220926	2256	1446	1734	226362
2014-15	373932	4745	1612	834	381123
2015-16	253135	5862	1033	948	260978
CGR%	**13.89****	**25.74***	**7.61**	**18.82**	**13.38****
Value (in Rs Crore)					
2006-07	57.70	4.15	5.98	3.30	71.13
2007-08	41.43	2.97	6.79	4.06	55.25
2008-09	115.04	5.36	0.91	12.03	133.34
2009-10	74.21	9.24	1.50	4.81	89.76
2010-11	155.20	0.95	1.71	10.75	168.61
2011-12	133.45	6.94	5.32	6.02	151.73
2012-13	148.72	10.89	9.98	3.32	172.91
2013-14	251.14	18.43	21.25	3.55	294.37
2014-15	835.06	34.10	21.76	4.67	895.59
2015-16	320.16	46.85	15.57	4.80	387.38
CGR%	**25.63****	**28.82****	**23.84***	**-2.08**	**24.59****
% to total (2015-16)	**82.65**	**12.09**	**4.02**	**1.24**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Table 5.16 Top 10 export destinations for potato (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Fresh/ Chilled				**Preserved Frozen**		
1	Nepal	167.23	52.23	**1**	Pakistan Ir	25.75	54.96
2	Sri Lanka	55.51	17.34	**2**	South Africa	8.48	18.10
3	Mauritius	21.85	6.83	**3**	Saudi Arab	2.58	5.51
4	Oman	18.48	5.77	**4**	Australia	2.56	5.46
5	Maldives	14.00	4.37	**5**	Canada	1.62	3.46
6	U Arab Emts	11.23	3.51	**6**	Malaysia	1.13	2.42
7	Kuwait	11.14	3.48	**7**	China P Rp	1.07	2.27
8	Malaysia	7.22	2.26	**8**	UAE	0.93	1.99
9	Seychelles	3.18	0.99	**9**	Singapore	0.66	1.41
10	Hong Kong	2.98	0.93	**10**	Nepal	0.46	0.98
Total (Incl. other)		**320.16**	**100.00**	**Total (Incl. other)**		**46.85**	**100.00**
	Preserved Not Frozen				**Potato Seeds**		
1	Nepal	12.86	82.60	**1**	Egypt	2.37	49.26
2	Bangladesh	0.84	5.36	**2**	Senegal	1.80	37.54
3	Sri Lanka	0.60	3.88	**3**	Pakistan	0.18	3.68
4	U S A	0.51	3.29	**4**	Nepal	0.17	3.44
5	Singapore	0.37	2.38	**5**	Austria	0.16	3.37
6	Malaysia	0.16	1.00	**6**	Mauritius	0.07	1.53
7	Australia	0.08	0.54	**7**	Russia	0.04	0.82
8	Thailand	0.05	0.33	**8**	Kazakhstan	0.02	0.32
9	Seychelles	0.03	0.22	**9**	Thailand	0.00	0.02
10	U K	0.03	0.20	**10**	Turkey	0.00	0.00
Total (Incl. others)		**15.57**	**100.00**	**Total (Incl. others)**		**4.80**	**100.00**

Green Chilli

Green Chilli is immature fruit that has been harvested before fully ripening. Not as spicy as red chilli peppers, they are available raw, canned or pickled and are a common addition to traditional dishes ranging from soups to snacks. During the year 2014-15, green chilli was cultivated in 170.03 thousand ha area with 1983.45 thousand MT production in the country. Karnataka (32.04%) and Bihar (21.09%) together contributes more than half of the India's production. Other producing states are Andhra Pradesh, Jharkhand, Haryana, Telangana, Nagaland, Himachal Pradesh and Uttar Pradesh.

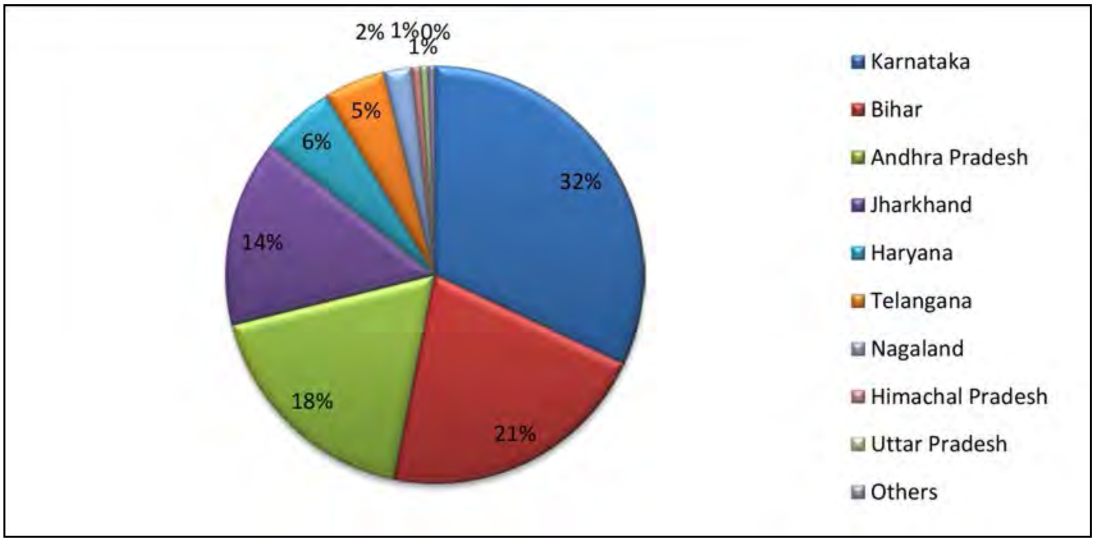


Fig 5.8 Leading chilli (green) producing states in India (2014-15)

Green chilli is exported as fresh as well as in form of chilli sauce. The growth of chilli export is presented in Table 5.17 and major export destinations for Indian green chilli during 2015-16 are reported in Table 5.18.

Table 5.17 Export of green chilli from India

Year	Qty in Tons			Value in Rs Crore		
	Green Chilli Fresh/ Chilled	Chilli Sauce	Total	Green chilli Fresh/Chilled	Chilli Sauce	Total
2006-07	18188	126	18314	22.16	0.81	22.97
2007-08	26895	182	27076	43.72	1.03	44.75
2008-09	30198	176	30374	48.32	1.00	49.32
2009-10	30655	72	30726	62.87	0.40	63.27
2010-11	28442	160	28602	61.22	0.94	62.16
2011-12	46703	362	47065	98.24	1.78	100.02
2012-13	35992	369	36361	91.54	2.78	94.32
2013-14	46540	442	46982	140.87	4.00	144.87
2014-15	32138	440	32579	136.14	4.15	140.29
2015-16	39850	575	40425	171.07	6.14	177.22
CGR%	**6.94***	**18.3****	**7.03***	**20.18****	**25.08****	**20.27****
% to total (2015-16)	**-**	**-**	**-**	**96.53**	**3.47**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Table 5.18 Top 10 export destinations for green chilli (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Green Chilli Fresh/Chilled				**Chilli Sauce**		
1	U A E	104.69	61.20	**1**	Malaysia	1.65	26.86
2	U K	21.78	12.73	**2**	Singapore	0.90	14.63
3	Bangladesh	15.09	8.82	**3**	U S A	0.87	14.18
4	Qatar	13.35	7.80	**4**	U A E	0.71	11.58
5	Baharain	6.09	3.56	**5**	U K	0.68	11.12
6	Oman	3.40	1.99	**6**	Nepal	0.26	4.31
7	Germany	0.92	0.54	**7**	Vietnam	0.21	3.50
8	Nepal	0.89	0.52	**8**	Canada	0.21	3.42
9	Australia	0.69	0.40	**9**	Australia	0.15	2.41
10	U S A	0.65	0.38	**10**	Sri Lanka	0.08	1.34
Total (Incl. other)		**171.07**	100.00	**Total (Incl. other)**		**6.14**	100.00

The data revealed that chilli export increased by 7.03% annually in terms of quantity and 20.27% in terms of value during the last decade. By quantity, the export of green chilli increased from 18314 tons in 2006-07 to 40425 tons in 2015-16. Similarly, by value, it increased from Rs 22.97 crore in 2006-07 to Rs 177.22 crore in 2015-16. Further, it was found that 96.53% of total green chilli export was in fresh/chilled form.

UAE was the major importer of Indian chilli (fresh/chilled) which accounted for 61.20% share followed by UK (12.73%) and Bangladesh (8.82%). For chilli sauce, Malaysia ranked first with 26.86% share followed by Singapore (14.63%) and USA (14.18%).

Garlic

Garlic is one of the important bulb crops. It is used as a spice or condiment. It has been considered as a rich source of carbohydrates, proteins and phosphorus. It contains volatile oil. Garlic helps in digestion. It reduces cholesterol in human blood. In India, during the year 2014-15, area and production was 230.6 thousand ha and 1251.9 thousand MT respectively. Madhya Pradesh, Gujarat, Rajasthan, Uttar Pradesh and Assam are the major producing states in India.

Madhya Pradesh contributes 21.57% share to the total country's production followed by Gujarat (19.97%) and Rajasthan (17.45%).

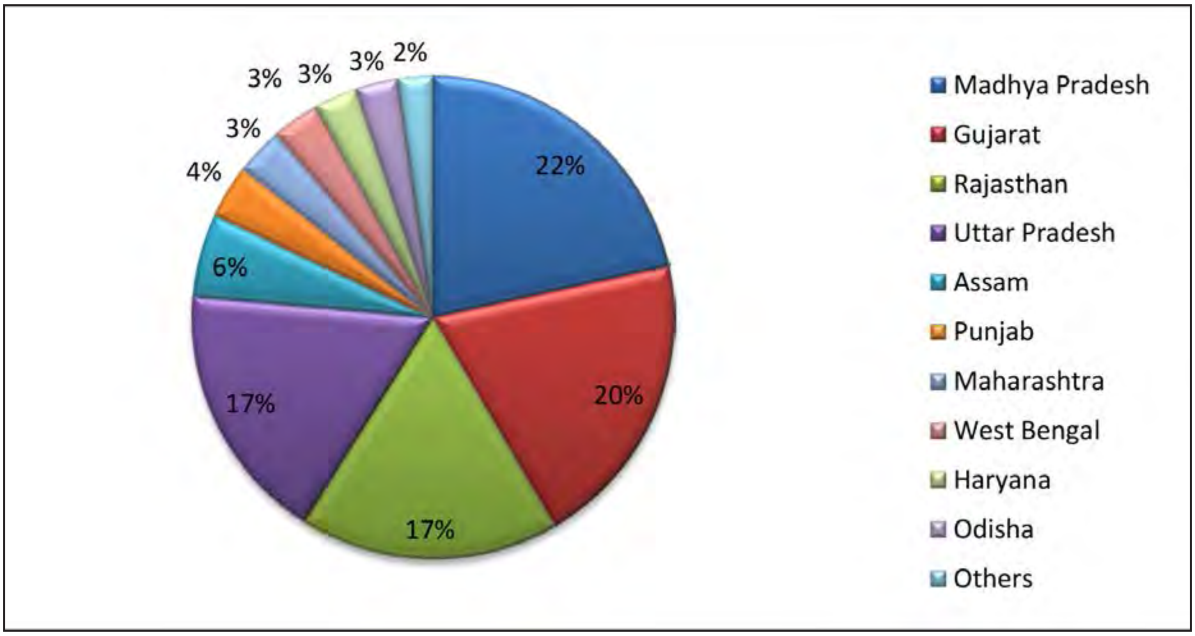


Fig. 5.9 Leading garlic producing states in India (2013-14)

Export of garlic from India as fresh/chilled as well as in proceeded from is reported in Table 5.19.

By quantity, fresh/chilled garlic did not reported significant growth but its value added products *viz*., dehydrated powder, dehydrated flakes and dried garlic reported significant growth by 27.51, 30.14 and 26.01% per annum, respectively during last decade. By value, overall export of garlic increased from Rs 25.42 crore in 2006-07 to Rs 149.45 crore in 2015-16 with 30.30% rise per annum. Out of various forms, fresh/chilled contributed 48.96% share in total garlic export in the year 2015-16 followed by dehydrated powder (27.61%), dehydrated flakes (18.77%) and dried (4.66%).

Top 10 Export Destinations for Indian garlic for the year 2015-16 is presented in Table 5.20. It shows that Malaysia emerged as top export destination for fresh/chilled garlic. Similarly, Thailand for Dehydrated Powder, Vietnam for Dehydrated Flakes and Mexico for dried garlic ranked top in export destinations.

Table 5.19 Export of garlic from India

Year	Fresh/ Chilled	Dehydrated Powder	Dehydrated Flakes	Dried	Total
Quantity (in tons)					
2006-07	12211	779	187	126	13303
2007-08	183	502	252	164	1100
2008-09	859	583	158	70	1670
2009-10	17781	646	426	81	18934
2010-11	21348	1012	1093	333	23787
2011-12	2677	630	629	92	4028
2012-13	36227	3969	1297	393	41886
2013-14	34020	4109	1885	657	40671
2014-15	16079	3689	1187	684	21639
2015-16	15500	4976	2601	955	24032
CGR%	**31.48**	**27.51****	**30.14****	**26.01****	**25.91**
Value (in Rs Crore)					
2006-07	19.31	4.37	1.08	0.66	25.42
2007-08	0.42	2.47	1.88	1.27	6.04
2008-09	2.10	3.01	0.79	0.33	6.23
2009-10	44.52	2.98	2.00	0.57	50.07
2010-11	80.06	5.46	6.97	1.68	94.17
2011-12	9.97	4.52	4.96	0.58	20.03
2012-13	75.59	27.71	7.79	2.94	114.03
2013-14	87.02	26.29	11.74	4.59	129.64
2014-15	42.72	23.36	8.53	3.93	78.54
2015-16	73.17	41.26	28.05	6.97	149.45
CGR%	**37.86***	**32.29****	**34.62****	**27.97****	**30.30***
% to total (2015-16)	**48.96**	**27.61**	**18.77**	**4.66**	**100.00**

** Significant at 5% level* *** Significant at 1% level*

Table 5.20 Top 10 export destinations for garlic (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Fresh/ Chilled				**Dehydrated Powder**		
1	Malaysia	22.13	30.24	**1**	Thailand	6.74	16.33
2	Pakistan	17.64	24.10	**2**	South Africa	5.17	12.52
3	Sri Lanka	9.40	12.85	**3**	Spain	3.82	9.25
4	Thailand	7.55	10.32	**4**	Vietnam	3.26	7.89
5	Vietnam	5.53	7.56	**5**	Brazil	2.80	6.78
6	Indonesia	4.91	6.70	**6**	Bangladesh	1.56	3.77
7	Philippines	2.15	2.93	**7**	U K	1.45	3.51
8	Nepal	1.05	1.44	**8**	U A E	1.44	3.48
9	Sudan	0.91	1.24	**9**	Egypt	1.43	3.47
10	U S A	0.56	0.76	**10**	Turkey	1.35	3.28
Total (Incl. other)		**73.17**	100.00	**Total (Incl. other)**		**41.26**	100.00
	Dehydrated Flakes				**Dried**		
1	Vietnam	8.11	28.91	**1**	Mexico	1.73	24.77
2	Thailand	5.32	18.96	**2**	U A E	1.71	24.48
3	Nepal	4.00	14.27	**3**	Kazakhstan	0.57	8.22
4	Pakistan	2.33	8.30	**4**	Nepal	0.37	5.36
5	Mexico	1.58	5.65	**5**	Poland	0.37	5.34
6	Japan	1.28	4.57	**6**	China	0.26	3.71
7	Argentina	1.01	3.61	**7**	Turkey	0.21	3.00
8	Spain	0.72	2.58	**8**	Serbia	0.20	2.91
9	Nigeria	0.59	2.12	**9**	Ukraine	0.19	2.74
10	Hong Kong	0.57	2.02	**10**	Netherland	0.19	2.74
Total (Incl. others)		**28.05**	**100.00**	**Total (Incl. others)**		**6.97**	**100.00**

Sweet Corn

Sweet corn is a variety of maize with high sugar content. It is the result of a naturally occurring recessive mutation in the genes which control conversion of sugar to starch inside the endosperm of the corn kernel. Sweet corn is picked when immature (milk stage) and prepared and eaten as a vegetable, rather than a grain. It must be eaten fresh, canned, or frozen, before the kernels become tough and starchy.

Export of sweet corn from India is presented in Table 5.21 and the major export destinations are given in Table 5.22.

Table 5.21 Export of sweet corn from India

Year	Qty in Tons			Value in Rs Crore		
	Frozen	Not Frozen	Total	Frozen	Not Frozen	Total
2006-07	123	32	154	0.34	0.16	0.50
2007-08	1290	28	1318	4.00	0.19	4.19
2008-09	1033	119	1152	2.95	0.49	3.44
2009-10	2279	217	2497	8.11	0.96	9.07
2010-11	3038	38	3076	11.62	0.46	12.08
2011-12	5431	192	5622	19.56	2.38	21.94
2012-13	8341	80	8421	26.73	1.42	28.15
2013-14	10772	24	10796	38.98	0.67	39.65
2014-15	8861	556	9417	56.59	6.22	62.81
2015-16	9965	1446	11411	53.48	15.99	69.47
CGR%	**41.98****	**27.88**	**41.18****	**49.14****	**42.57****	**48.23****
% to total (2015-16)	**-**	**-**	**-**	**76.98**	**23.02**	**100.00**

** Significant at 5% level   ** Significant at 1% level*

It shows that export of sweet corn significantly increased by quantity as well as by value during last decade. By quantity it's increased from 154 tons in 2006-07 to 11411 tons in 2015-16 showing 41.18% annual growth. Similarly, by value also it increased from Rs 0.50 crore in 2006-07 to Rs 69.47 crore in 2015-16 indicating 48.23% annual growth. Further, it was observed that sweet corn is mainly exported in frozen form (76.98%) and the rest in non-frozen form (23.02%).

Russia ranked first with 29.44 % share in export of frozen sweet corn followed by Saudi Arab (27.24%) and UK (19.42%). In case of non-frozen category, Russia again emerged as the top export destination with 85.70% share.

Table 5.22 Top 10 export destinations for sweet corn (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Frozen				**Not Frozen**		
1	Russia	15.75	29.44	**1**	Russia	13.70	85.70
2	Saudi Arab	14.57	27.24	**2**	Saudi Arab	1.01	6.34
3	U K	10.39	19.42	**3**	U A E	0.67	4.16
4	U A E	6.03	11.27	**4**	Chile	0.22	1.36
5	Iran	2.42	4.53	**5**	Malaysia	0.19	1.21
6	Oman	0.96	1.80	**6**	U K	0.13	0.81
7	U S A	0.49	0.92	**7**	Norway	0.06	0.38
8	Japan	0.45	0.84	**8**	Maldives	0.00	0.02
9	Pakistan	0.39	0.73	**9**	Guyana	0.00	0.01
10	Baharain	0.34	0.63	**10**	New Zealand	0.00	0.01
Total (Incl. others)		**53.48**	100.00	**Total (Incl. others)**		**15.99**	100.00

Pea

Pea is used as a vegetable or in soup, canned frozen or dehydrate. It is cooked as a vegetable along or with potatoes. During the year 2013-14, the area, production and productivity under country was 433.6 thousand ha, 3868.6 thousand MT and 8.9 MT/ha respectively. Production of peas became almost double during the last decade in India. Uttar Pradesh, Madhya Pradesh, Jharkhand, Himachal Pradesh and Punjab are the major pea producing states in India. Uttar Pradesh alone contributes 50% of the production of entire country (2014-15).

Export of pea from India is presented in Table 5.24. Pea is exported in fresh/chilled form as well as in frozen form. The data revealed that the export of pea in frozen category reported significant growth both by quantity (18.75% per annum) and by value (27.61%) during last decade. Whereas, fresh/ chilled pea by quantity did not show any significant rise but by value it reported 19.96% rise per annum.

Overall export of pea reported a significant growth by quantity (18.12%) and by value (25.14%). Further, it was found that frozen category accounted for higher share (77.18%) in total export of peas as compared to fresh/chilled (22.82%) during 2015-16.

Table 5.23 Area, production and productivity of pea in India

Year	Area ('000 ha)	Production ('000 MT)	Productivity (MT/ha)
2004-05	276.3	1944.8	7
2005-06	286.1	2270	7.9
2006-07	297	2402	8.1
2007-08	313	2491	8
2008-09	348	2916	8.4
2009-10	364.9	3029.4	8.3
2010-11	370	3517	9.5
2011-12	408.2	3744.8	9.2
2012-13	420.9	4006.2	9.5
2013-14	433.6	3868.6	8.9

Source: www.nhb.gov.in

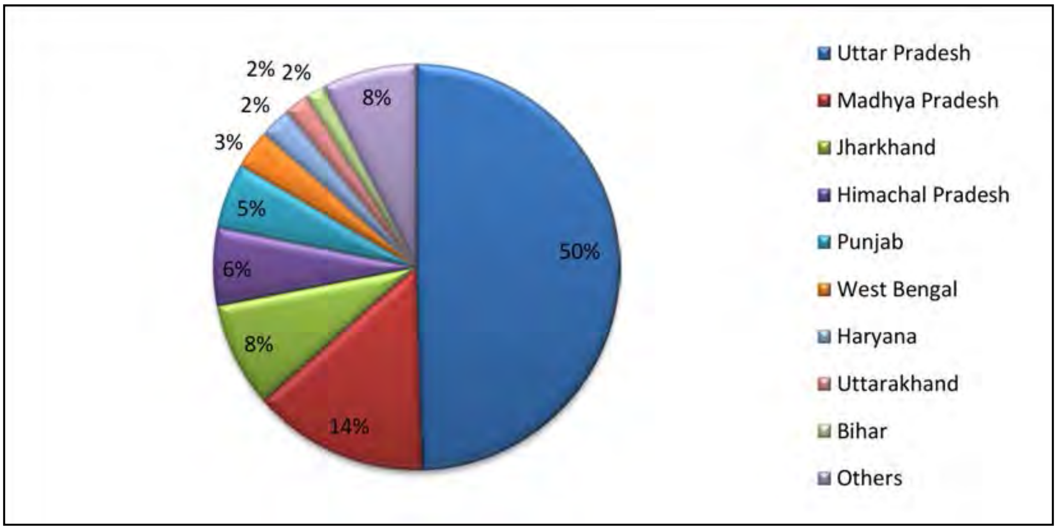


Fig 5.10 Leading pea producing states in India (2014-15)

The top 10 export destinations for Indian pea are given in Table 5.25. In fresh/ chilled category, UK ranked first with 42.79% share followed by Nepal (29.41%). Whereas in frozen category USA emerged as the top export destination with 32.65% share followed by Saudi Arab (22.80%) and Nepal (13.65%).

Table 5.24 Export of pea from India

Year	Qty in Tons			Value in Rs Crore		
	Fresh/ Chilled	Frozen	Total	Fresh/ Chilled	Frozen	Total
2006-07	1184	949	2133	2.73	2.87	5.60
2007-08	815	1871	2685	2.71	5.56	8.27
2008-09	2519	3526	6046	7.95	12.14	20.09
2009-10	1271	2257	3527	3.54	8.13	11.67
2010-11	1034	4062	5096	2.64	14.28	16.92
2011-12	1981	8565	10546	3.53	32.99	36.52
2012-13	3146	4758	7904	7.65	21.31	28.96
2013-14	8483	11487	19969	20.12	63.77	83.89
2014-15	19366	11758	31124	46.56	65.18	111.74
2015-16	560	2630	3190	5.19	17.56	22.75
CGR%	**15.08**	**18.75***	**18.12***	**19.96***	**27.61****	**25.14****
% to total (2015-16)	**-**	**-**	**-**	**22.82**	**77.18**	**100.01**

** Significant at 5% level   ** Significant at 1% level*

Table 5.25 Top 10 export destinations for pea (2015-16)

Rank	Country	Value Rs Crore	% to Total	Rank	Country	Value Rs Crore	% to Total
	Fresh/ Chilled				**Frozen**		
1	U K	2.22	42.79	**1**	U S A	5.73	32.65
2	Nepal	1.53	29.41	**2**	Saudi Arab	4.00	22.80
3	Saudi Arab	0.42	8.11	**3**	Nepal	2.40	13.65
4	Australia	0.39	7.48	**4**	U Arab Emts	1.81	10.31
5	U Arab Emts	0.30	5.74	**5**	Oman	0.90	5.13
6	Maldives	0.12	2.40	**6**	Canada	0.71	4.02
7	Ireland	0.12	2.28	**7**	Kuwait	0.51	2.90
8	Baharain Is	0.03	0.61	**8**	Baharain Is	0.33	1.90
9	U S A	0.01	0.27	**9**	Qatar	0.25	1.42
10	Hong Kong	0.01	0.24	**10**	Singapore	0.25	1.40
Total (Incl. other)		**5.19**	100.00	**Total (Incl. other)**		**17.56**	100.00

5.4 Export Specifications

Quality parameters required by major importing countries for vegetables are presented in Table 5.26.

Table 5.26 Export specifications for major vegetables

Sr. No.	Commodity	Parameters for export to Middle East and Gulf countries
1	**Okra**	3-5 inch length, green tender, packing 5 kg
2	**Tondali**	1-2 inch length, green tender, packing 5 kg
3	**Bottle Gourd**	12 inch length, greenish tender, straight, packing 5 kg
4	**Pea**	5-6 inch length, green tender, straight, packing 5 kg
5	**Guar**	4-5 inch length, not over matured, packing 5 kg
6	**Suran**	Cleaned, weighing around 5-10 kg
7	**Green Chilli**	3-4 Inch length, green, packing 5 kg
8	**Drum Stick**	24 Inch length, straight, thick, packing 5 kg
	Mode of Transport	By Air or By Sea

Source: MSAMB

Chapter 6

Role of APEDA in Promoting Agricultural Exports

The Agricultural and Processed Food Products Export Development Authority (APEDA) was established by the Government of India under the Agricultural and Processed Food Products Export Development Authority Act passed by the Parliament in December, 1985. The Act (2 of 1986) came into effect from 13th February, 1986 by a notification issued in the Gazette of India: Extraordinary: Part-II [Sec. 3(ii): 13.2.1986). The Authority replaced the Processed Food Export Promotion Council (PFEPC).

6.1 Functions of APEDA

In accordance with the Agricultural and Processed Food Products Export Development Authority Act, 1985, (2 of 1986) the following functions have been assigned to the Authority.

- Development of industries relating to the scheduled products for export by way of providing financial assistance or otherwise for undertaking surveys and feasibility studies, participation in enquiry capital through joint ventures and other reliefs and subsidy schemes.
- Registration of persons as exporters of the scheduled products on payment of such fees as may be prescribed.
- Fixing of standards and specifications for the scheduled products for the purpose of exports.
- Carrying out inspection of meat and meat products in slaughter houses, processing plants, storage premises, conveyances or other places where such products are kept or handled for the purpose of ensuring the quality of such products.
- Improving of packaging of the scheduled products.
- Improving of marketing of the scheduled products outside India.
- Promotion of export oriented production and development of the Scheduled products.
- Collection of statistics from the owners of factories or establishments engaged in the production, processing, packaging, marketing or export of the scheduled products or from such other persons as may be prescribed on any matter relating to the scheduled products and publication of the statistics so collected or of any portions thereof or extracts therefrom.
- Training in various aspects of the industries connected with the scheduled products.

6.2 Products monitored by APEDA

APEDA is mandated with the responsibility of export promotion and development of the following scheduled products:

- Fruits, Vegetables and their Products.
- Meat and Meat Products.
- Poultry and Poultry Products.
- Dairy Products.
- Confectionery, Biscuits and Bakery Products.
- Honey, Jaggery and Sugar Products.
- Cocoa and its products, chocolates of all kinds.
- Alcoholic and Non-Alcoholic Beverages.
- Cereal and Cereal Products.
- Groundnut, Peanut and Walnut.
- Pickles, Papads and Chutneys.
- Guar Gum.
- Floriculture and Floriculture Products.
- Herbal and Medicinal Plants.

In addition to this, APEDA has been entrusted with the responsibility to monitor import of sugar.

6.3 Trade promotion assistance

Marketing development assistance (MDA) scheme

It is under operation through the Department of Commerce to support the under mentioned activities:

(i) Assist exporters for export promotion activities abroad.

(ii) Assist Export Promotion Councils (EPCs) to undertake export promotion activities for their product(s) and commodities.

(iii) Assist approved organizations/trade bodies in undertaking exclusive nonrecurring innovative activities connected with export promotion efforts for their members.

(iv) Assist Focus export promotion programmes in specific regions abroad like FOCUS (LAC), Focus (Africa), Focus (CIS) and Focus (ASEAN + 2) programmes.

(v) Residual essential activities connected with marketing promotion efforts abroad.

Assistance to individual exporters for export promotion activities abroad or Participation in EPC etc. led BSMs/Trade Fairs/ Exhibitions:

Sr. No.	Area /Sector	No. of Visit	Maximum Financial Ceiling per event
1	Focus LAC	1	Rs 2,50,000
2	Focus Africa (Including WANA)	1	Rs 2,00,000
3	Focus CIS	1	Rs 2,00,000
4	Focus ASEAN + 2	1	Rs 2,00,000
5	General Areas	1	Rs 1,50,000
	Total	**5**	

LAC: Latin American Countries : 26, **ASEAN**: Association of Southeast Asian Nations : 8+2
CIS: Commonwealth of Independent States (former Soviet Republics)

The participation of individual companies in the above activities shall be subject to the following conditions:

- Any exporter having FOB value of Export **up to 30 crores**.
- Having **12 months membership** of APEDA
- Maximum number of permissible participations shall be five in a financial year as indicated in above table. However, for priority sectors, having large employment generation potential, viz. Agriculture including food items, Handicrafts, Handlooms, Carpets, Leather & Minor Forest Produce including LAC, 2 (two) participations in General Areas would be admissible with the assistance of Rs 1,50,000 for each participation. The exporters availing of assistance under this provision would, however, be in addition to these participations, eligible for only any 2 Focus Area participations.
- Intimation application must be received in the concerned EPC etc. with a minimum of 14 days clear advance notice excluding the date of receipt of application in the office of the concerned organization and the date of departure from the country.
- A Maximum of three participations in a particular trade fair/exhibition would be eligible for MDA assistance and exporting companies after availing assistance three times including past cases for a particular fair/exhibition, have to participate in that fair, if any, on self-financing basis.

Schemes for market development

Sr No.	Components	Pattern of Assistance
1	Assistance to exporters for use of packaging material as per standards and specifications developed or adopted by APEDA	25% of the total cost of packaging material (including inner packaging materials *viz.* punnets, sleeves, rubber band etc), subject to a ceiling of Rs 5 lakh
2	Assistance for conducting feasibility studies etc.	50% of the total cost subject to a ceiling of Rs 10 lakh
3	Conducting surveys, feasibility studies etc. for the common benefit of a number of exporters who may be the members of the Associations	Assistance will be in line with the guidelines of MDA Scheme
4	Brand publicity (Product specific Indian Brands) through advertisement in international print/ electronic media etc.	25% of the total cost subject to a ceiling of Rs 50 Lakh .Not to be extended to an exporter beyond 3 consecutive years.

Scheme for infrastructure development

Sr No.	Components	Pattern of Assistance
1	Establishment of common infrastructure facilities by APEDA or any other Government or Public Sector	90% grant-in-aid by APEDA and 10% from other govt /public sector
2	Purchase of specialised transport units for animal products, horticulture and floriculture sector	40% of the cost subject to a ceiling of Rs 7.5 lakh
3	Setting up of sheds for intermediate storage and grading / storage / cleaning operation of produce.	40% of the cost of equipment subject to a ceiling of Rs 10.00 lakh

4	Setting up of mechanized handling facilities such as sorting, grading, washing, waxing, rip-ening, packaging & palletisation, pre-cooling, cold storage, fumigation, X-ray screening, hot water dip treatment, Water softening plant, etc.	40% of the cost of equipment subject to a ceiling of Rs 25.00 lakh
5	Setting up of integrated post harvest-handling system (pack houses with any two or more of the above facilities	40% of the cost subject to a ceiling of Rs 75.00 lakh
6	Setting up of cable cars (covering minimum of 50 ha of plantation) for banana and other crops	-do-
7	Setting up of vapor heat treatment, electro-nic beam processing or irradiation facilities	40% of the cost subject to a ceiling of Rs 50 lakh
8	Setting up of environment control system e.g. pollution control, effluent treatment etc	40% of the cost subject to a ceiling of Rs 35 lakh
9	Setting up of specialized storage facilities such as high humidity cold storage deep freezers, controlled atmosphere (CA), etc for fresh and processed horticultural produce	40% of the cost subject to a ceiling of Rs 25 lakh

Schemes for quality development

Sr No.	Components	Pattern of Assistance
1	Assistance for installing quality testing equipments	50% of the cost subject to a ceiling of Rs 25 lakh.
2	Installing quality management, quality assurance and quality control systems such as ISO series, HACCP, BRC, GAP etc. including consultancy and certification	50% of the cost subject to a ceiling of Rs 5 lakh.
3	Testing of water, soil, residues of pesticide, veterinary drugs, toxins, heavy metal contaminants in fruits and vegetables, processed products, floriculture, animal products.	50% of the total cost subject to a ceiling of Rs 5000/- per sample where residue monitoring is proposed by APEDA.
4	Adoption of global standards for traceability registration for Global Company Prefix Number (GCP), Electronic Product Code (EPC/RFID)	25% of the fee subject to a ceiling of Rs 1 lakh.

Schemes for capacity building

Sr No.	Components	Pattern of Assistance
1	Upgradation of APEDA recognized labs for export testing	50% of the cost for private labs; 75% for State Govt. /University lab; and 100% for the Central Government labs; The above is subject to a ceiling of Rs 75 lakh.
2	Assistance for technical skill upgradation of personnel of exporters in India for export development	Rs 20,000 per personnel per residential training (not more than 5 personnel from single organization per year) in a recognized training institutes. Assistance will be limited to an average cost of Rs 5000 per day per personnel 100% for APEDA representatives.
3	Assistance for organizing seminars/ group activities including study tour within the country and for bringing out information literature	50% of the total cost subject to a ceiling of Rs 1 lakh for national seminar and Rs 2 lakh for international seminar.
4	Assistance to carry out relevant applied Research & Development activities for export enhancement	100% by APEDA through ICAR institutions or State Agriculture Universities. In case of assistance to exporters associations in cooperative/private sector up to 50% of the total cost subject to a ceiling of Rs 50 lakh per project.

Scheme for transport assistance

The norms for TA calculation are as follows:

TA Norms for Exports by Air
Least of:
10% of FOB Value
25% of Freight
Specific rate (Rs per kg)

TA Norms for Exports by Sea	
For eligible products exported in non-reefer containers	**For eligible products exported in reefer containers**
Least of:	Least of:
10% of FOB value	10% of FOB value
25% of Basic Ocean Freight	33% of Basic Ocean Freight (inclusive of inland freight in reefer containers & basic ocean freight) (see note below)
Specific rate (Rs per kg)	Specific rate (Rs. per kg)

*** Note:** Inland freight by Reefer container (from factory to port) will be included in the freight norm used for TA calculations subject to the following conditions:

1. The reefer container is factory stuffed (i.e. inland movement from factory to port is by reefer container truck).
2. Copies of the excise and customs bonded seal (for inland movement) are included with the TA claim.
3. The total quantum of TA does not exceed 50% of the ocean freight.

Eligible items and permissible destinations for air / sea transport assistance are listed below:

A. By air

Eligible Products/Item	Destinations	Minimum FOB Value (Rs/Kg) for eligibility
Floriculture		
Fresh Cut Flowers/ Bouquets	All Destinations except neighboring countries	100
Live Plants and Bulbs		100
Tissue Cultured Plants		2000
Fresh Fruits		
Fresh Fruits excluding Mango and Grapes	All Destinations except neighboring countries	30
Grapes	All destinations except neighboring countries, EU and Middle East Countries	35
Mangoes		30

Fresh Vegetables		
Fresh Vegetables (including organically grown vegetables and mixed vegetables excluding fresh Mushrooms)	All Destinations except neighboring countries	30
Fresh Mushrooms		35

B. By sea

Eligible Products/Item	Destinations	Minimum FOB Value (Rs/Kg.) for eligibility
Fresh/ Chilled Fruits		
Fresh Fruits excluding Mango and Grapes	All Destinations except neighboring countries	30
Grapes	All destinations except neighboring countries, EU and Middle East Countries	35
Mangoes		30
Fresh/ Chilled Vegetables		
Fresh/ Chilled Vegetables (including organically grown vegetables and mixed vegetables)	All Destinations except neighboring countries	30
Processed Vegetables		
Preserved Vegetables (Acetic Acid/ Vinegar/Brine) (including Gherkins prepared and preserved, Onions in Acetic Acid and Potato Flakes/ Powder but excluding Pulses)		35
Dehydrated Onion & Garlic (Flakes/Powder	All Destinations except neighboring countries.	70
Pickles/ Chutneys (Fruits or Vegetables or mixture of Fruits and Vegetables)		60
Mushrooms Prepared/ Preserved		50
All processed Vegetables in Frozen/ IQF form		60

Processed Fruits		
All Processed Fruit Preparations (Excluding squashes, juices and pulps)	All Destinations except neighboring countries.	50
Fruit Squash		60
Fruit Juices		60
Fruit Pulps		60
Floriculture		
Fresh Cut Flowers	All Destinations except neighboring countries.	100
Dried Flower		75

Transport assistance (by Air)

A. Specific TA rates for exports of eligible items by Air

Destination	Specific TA Rate (Rs Per kg)	
	For all eligible products/ items except Fresh Cut Flowers	Fresh Cut Flowers
Europe	17	30
Africa	15	30
Middle East	7	10
CIS Countries	7	12
South East Asia	7	12
East & North Asia (including China Japan)	18	30
North America (USA, Canada & Mexico)	25	45
Central America & Caribbean	25	45
South America	25	45
Australia & New Zealand	18	34

Transport assistance (by Sea)

B. Specific TA rates for exports of eligible terms by sea

Destination	TA Rate (Rs Per kg)	
	Reefer Container	Non-Reefer Container
Europe	6.0	1.5
Africa	6.0	1.5
Middle East	3.0	1.0
CIS Countries	6.0	1.25
South East Asia	3.0	1.0
Far East & North Asia (including China Japan)	6.0	1.25
North America (USA, Canada & Mexico)	8.0	2.5
Central America & Caribbean	8.0	2.5
South America	8.0	2.5
Australia & New Zealand	6.0	1.25

Region wise % basic ocean freight

SR. NO.	REGION	% BASIC OCEAN FREIGHT
1	Africa	70.00
2	Australia	70.00
3	Europe	61.00
4	Middle East Asia	73.00
5	North America	74.00
6	North Asia	63.00
7	South America	78.00
8	South Asia	71.00

Online services

I-TRACK SYSTEM
• Register as Member
• Exporte'r Login
• Apeda's Internal User
TRACEABILITY
• HORTINET : Grape / Pomegranate /Mango / Vegetables
• PEANUTNET
• TRACENET
• MEATNET

Chapter 7

Challenges in export of fruits and vegetables

Although India is a leading fruit producer in the world, the fresh fruit export from India is very small owing to a number of constraints. These constraints relates to production practices, post harvest technologies, issues related to supply chain, market access and non-tariff restrictions and governmental policies.

7.1 Constraints for Export

India continues to be absent or at best a marginal player in most of the leading markets for its export of fresh fruits. Indian players have not succeeded in establishing direct linkages with buyers/consumers in importing countries, as a result of which a large proportion of exports are being further processed and re-exported by other countries. Some of the major concerns for promoting the export relate to-

- Lack of exportable varieties (high fiber content, inappropriate appearance and texture and large size of stone)
- Lack of post-harvest treatment facilities such as of vapour heat treatment
- Lack of pack houses from farm to port
- High cost of obtaining certification for exports like Eurep-Gap

The issues can be categorized into "Supply Chain Issues" which are inherent to the domestic supply chain of food products and "Market Access Issues" which comprise of various parameters and factors driven by the requirements of the target countries.

7.2 Supply Chain Issues

- Uneconomic scale of operation
- Lack of consistency in supply and quality
- Lack of cost competitiveness due to statutory changes, intermediation and wastages losses
- Inadequate and inappropriate storage and distribution infrastructure
- Lack of technical support for the agro-industrial sector

7.3 Market Access Issues

- **Non-Tariff Barriers:** Non-tariff barriers can take various forms. Broadly these can be categorized as under:

- Import Policy Barriers
- Standards, Testing, Labelling and Certification requirements
- Anti-dumping and Countervailing Measures
- Export Subsidies and Domestic Support
- Government procurement
- Short product life cycle
- Lack of brand image

Most exports from India lack scale- for example the largest fresh produce exporter records annual sales of about Rs 500 million. The low volume translates into lack of economics in operation and mares exports uncompetitive. Hence, exporters are not able to establish themselves as long term players in the export market, and rely heavily on opportunistic businesses. These factors cumulatively translate into low investments in upgrading skill sets, product innovation, quality improvement and brand building.

7.4 Multiple Safety standards

The emergence of private food safety and quality standards mainly in developed countries is now a well-established fact. These standards operate alongside regulatory systems but in terms of market access and access to the shelves of the leading supermarkets in the rich countries, it become almost mandatory. With these standards becoming a global phenomenon, countries in the developing world face increasing constraints in exporting their food products to markets in the developed countries.

7.5 Technological Constraints

The major technology related constraints contributing to low productivity of horticultural crops and inferior quality of produce are:

- Vast majority of holdings are small and un-irrigated
- Large tracts of low and unproductive plantations needing replacement/ rejuvenation.
- Low productivity of crops due to inferior genetic stocks and poor management.
- Inadequate supply of quality' planting materials of improved varieties o High incidence of pests and diseases.
- Heavy post harvest losses and low utilization in processing sector.

As per available literature, several studies have been conducted by various export institutions like APEDA ICAR, NHB, NABARD regarding constraints in export of fruits and vegetables. They have highlighted numerous problems. A few of them are listed below-

- Complex supply chain is one of the main barriers in export of fruits and vegetables. In markets a number of small producers, commission agents are operating. Therefore, for a bulk purchase of lot, these numbers of functionaries are to be dealt, causing inconvenience and more post-harvest losses.
- Lack of continuous and adequate supply. Weather fluctuations, causing interrupted supply of fruits and vegetables in the market. Sometimes, weather also delayed arrivals, keeping prices on the boil for certain period.
- Inconsistent supply of exportable quality.
- Lack of forward/backward linkage between growers/suppliers and buyers/ exporters which affects the market potential.
- Highly perishable (short storage life and susceptible to diseases) resulting in high post-harvest losses.
- High freight cost and inadequate transport facilities.
- The disparity in wholesale and retail prices.
- Complex Procedures for Sampling/Product Testing
- High Cost of Certification
- Frequent and sudden impose of ban by importing country

7.6 Commercial constraints

According to the USDA economic report, the commercial constraints on fruits and vegetables include:

- **Trade barriers**: Natural trade barriers include high transportation costs to distant markets, and artificial barriers include legal measures such as protectionist policies. Liberalization of trade through international agreements has been instrumental in relaxing many legal trade barriers by reducing tariffs and by harmonizing the technical barriers to trade.
- **Scientific phyto-sanitary requirements**: Importing countries set the standards that potential trade partners must meet in order to protect human health or prevent the spread of pests and diseases. For instance, Japanese imports of US apples are limited to Red and Golden Delicious apples from Washington and Oregon. The Japanese, who are mainly concerned with the spread of fire blight, impose rigorous and costly import requirements on the US apple shippers. The apples

must be subjected to a cold treatment and fumigation with methyl bromide before shipment to Japan, and three inspections of US apple orchards during the production stage. Infestation by fruit flies (*Tephritidae: Diptera*), common in the tropics, is a major constraint to the production and export of tropical fruits.

- **Technological innovations**: Countries can increase their competitiveness and world market shares by providing higher quality products and promoting lower prices through technological innovations.

Table 7.1 represents the problems faced by exporters of fruits and vegetables from Gujarat. According to Researcher, different problems were identified in Gujarat through random survey method and for getting mean score Garret Ranking technique was employed.

Table 7.1 Problems faced by exporters of fruits and vegetables from Gujarat

Sr. No.	Exporters perceives problems for export of fruits & Vegetables	Mean Score	Rank
1	Difficulties in certification	4.0	1
2	Difficulties in custom clearance	3.9	2
3	Problems in quoting price with fluctuating exchange rates	3.9	3
4	Sanitary and Phytosanitary (SPS) measures	3.8	4
5	Price fluctuation of the commodity supply at home country	3.7	5
6	Problem finding reliable foreign distributor	3.6	6
7	Competition from firms in foreign markets	3.5	7
8	Difficulty in collecting payment from customers abroad	3.5	7
9	Lack of capital to finance expansion into foreign markets	3.4	8
10	Lack of capacity dedicated to continuing supply of exports	3.3	9
11	Confusing foreign import regulations	3.3	9
12	Informational barrier	3.3	9
13	Lack of facilities like pre-cooling, cold-storage, pack house, etc.	3.1	10
14	Labelling and packaging requirement	3.1	10
15	Transportation cost and duration	3.1	10

The results revealed that the exporters of fruits and vegetables from Gujarat were facing several problems among which difficulties in certification ranked first followed by difficulties in custom clearance, problems in quoting price with fluctuating exchange rates, sanitary and phyto-sanitary (SPS) measures, price fluctuation of the commodity supply at home country, problem finding reliable foreign distributor, competition from firm in foreign markets, difficulty in collecting payment from customers abroad *etc*.

Chapter 8

Concepts in export and export procedure

8.1 Establishing an Export Firm/Company

Setting up or formation of an Export Firm/Company is the first step to start export-import business. New entrepreneur may start his business as an individual (proprietary concern) or partnership firm or a joint stock company or even forming cooperative society or producers' company. Individual (proprietary concern) is the simplest way. Partnership firms should execute a partnership deed as per Indian Partnership Act 1932 on a Non Judicial Stamp Paper as per the Stamp Act of the State Government and register the partnership firm with the Ministry of Corporate affairs.

Some useful Tips for Setting up of an Export Firm

- **Name of Firm**: Find attractive name for your Export Firm. It should have only two to three words. First word should be unique, inspiring and meaningful. It should be easy to spell and speak. Last word should be preferably Exports or International or Overseas. It indicates that you are operating in an international market. Exim or Impex or such other hybrid words should be avoided.

  For example, **Orbit International, Skyline Overseas, ABC Exports**

  If you are dealing with a particular commodity like, agro, spices, chemicals, engineering etc., you may include it in the middle of the name.

  For example, **Sun Agri Exports, Maruti Fresh Fruits International**
- **PAN Card**: Once you decided name of your firm, now go for obtaining PAN Card as it is must for getting your IEC number. Apply to concerned Income Tax office for PAN number. In case of proprietorship firm, PAN of person name is valid. In other cases, PAN of company name is required.
- **Company Logo**: Create / Design attractive logo of your firm to showcase your dream/ vision
- **Local Registration:** Get Shop Act Licence from local municipal authority or registered with concerned government authority. If you are engaged in manufacturing, register with District Industry Centre to get SSI number or get Udhyog Aadhar No. Get membership of local Chamber of Commerce which will be helpful in opening Bank Account as well as getting Certificate of Origin and RCMC.
- **Bank Account**: Open a current account of your firm in any Public Sector Bank or any reputed Private Sector Bank like, ICICI Bank, HDFC Bank, UTI Bank, etc. It is advisable to open current account with a RBI authorized (AD) bank dealing in Foreign

Exchange directly and not with any cooperative bank as they don't deal in foreign currency.

- **VAT/ST/CST**: This is not required at this stage for getting IEC number. It will be required at later stage to get Tax benefits for exports as export goods are exempt from VAT/CST. Exporter can avail this exemption only if registered under VAT/CST.

Build a Corporate / International Image

Your credibility is a key to your global success. Even if you run a small company you should present yourself internationally as a solid and reliable potential partner. A few small subtle changes and touches will add considerably to your global appearance. Use "+91" the international dial code and the word "India" in contact details and business cards.

Learn about Export/Import Regulations and Terms of Trade

Exporting is complex and competitive. Your staff should know the differences between domestic and international trade. Spend some time to learn about export procedure, registration, regulations, terms of trade, delivery terms, methods of international payments, International Trade ethics and so on. Hire experienced people or train your staff.

8. 2 Obtaining IEC Number (Importer-Exporter Code)

An IEC is a 10 digit number which is mandatory for undertaking export/ import Business. No export or import shall be made by any person without obtaining IEC number unless specifically exempted. Now the facility for IEC in electronic form or e-IEC has also been operationalised. An IEC allotted to an applicant shall have permanent validity unless cancelled by the competent authority. The IEC will cover all branches / divisions / units / factories of the applicant. Only one IEC shall be issued against a single PAN.

Online Procedure for getting online IEC Number

- Visit DGFT website (http://dgft.gov.in).
- Go to "Online IEC Application".
- Apply on line providing necessary documents and application fees.
- Currently, application fee is Rs 500 which is to be paid online through net banking or credit/debit card.
- Application has to be digitally signed by Proprietor/ Managing Partner/ Designated Partner /Director/ Secretary or Chief Executive of the Society/ Managing Trustee / Karta as the case may be.
- List of documents required for various types of export firms is available in the website.

- After processing of e-IEC application applicant would be informed through e-mail that his/her application for e-IEC has been approved and a computer generated e-IEC is available on the DGFT website. By clicking on "Application Status" after having filled and submitted the requisite details in "Online IEC Application" webpage, applicant can view and print his/her e-IEC. Or a computer generated rejection letter would be sent at the e-mail address of the applicant. If applicant desires to apply a fresh, he/she may do so after repeating the process as above and by paying Rs 500/- as application processing fee.
- Only one IEC is required for export/import of any number of products for life time.
- Existing IEC can be modified by applying online when required.

8.3 Obtaining RCMC of Concerned Export Promotion Councils (EPCs)

After obtaining IEC Number, it is advisable to obtain Registration-cum-Membership Certificate (RCMC) from Export Promotion Council (EPC) related to the products you want to export eg. APEDA for specific agro products including fruits and vegetables, Spice Board for spices and so on. RCMC is required for availing authorization to import/ export or any other benefit under FTP and to avail services/ guidance.

Export Promotion Councils (EPCs) are organizations of exporters, set up with the objective to promote and develop Indian exports. Each Council is responsible for promotion of a particular group of products/ projects/services. EPCs are also eligible to function as Registering Authorities to issue RCMC to its members. DGFT has recognised 37 various EPCs/ Commodity Boards/ Authorities based on product groups to help exporters in various aspects.

The basic objective of EPCs is to promote and develop the exports of the country. Each Council is responsible for the promotion of a particular group of products, projects and services. The main role of the EPCs is to project India's image abroad as a reliable supplier of high quality goods and services. In particular, the EPCs shall encourage and monitor the observance of international standards and specifications by exporters. The EPCs shall keep abreast of the trends and opportunities in international markets for goods and services and assist their members in taking advantage of such opportunities in order to expand and diversify exports.

Major Functions of EPCs

- To provide commercially useful information and assistance to their members in developing and increasing their exports;
- To offer professional advice to their members in areas such as technology upgradation, quality and design improvement, standards and specifications, product development, innovation, etc.;
- To organise visits of delegations of its members abroad to explore overseas market

opportunities;

- To organise participation in trade fairs, exhibitions and buyer-seller meets in India and abroad;
- To promote interaction between the exporting community and the Government both at the Central and State levels; and
- To build a statistical base and provide data on the exports and imports of the country, exports and imports of their members, as well as other relevant international trade data.

Applying for RCMC

- Application is to be made on line through the website of selected EPCs.
- While applying for RCMC, an exporter has to declare his/her main line of business in the application. The exporter is required to obtain RCMC from the EPC which is concerned with the product of his/her main line of business.
- In case an export product is not covered by any Export Promotion Council/ Commodity Board etc., RCMC in respect thereof is to be obtained from Federation of Indian Exporters Organization (FIEO).
- In case of multi product exporters, not registered with any EPC, where main line of business is yet to be settled, the exporter has an option to obtain RCMC from FIEO.
- In respect of multi product exporters having their head office/ registered office in the North Eastern States, RCMC may be obtained from Shellac & Forest Products Export Promotion Council (except for the products looked after by APEDA, Spices Board and Tea Board).
- In respect of exporters of handicrafts and handloom products from the State of Jammu & Kashmir, Director, Handicrafts, Government of Jammu and Kashmir is authorised to issue Registration Cum Membership Certificate (RCMC).
- As the Registration and Membership is decentralized, exporters/ desirous organizations are requested to file applications for membership with the concerned Regional Offices.
- Registration Fee varies from EPC to EPC. There may be variation in fees for different categories of membership. Normally it ranges from Rs 5000 to 10000.
- RCMC shall be deemed to be valid for five years.

8. 4 Selection of products for export and finding their ITC (HS) Codes

More than 10,000 products are exported from India including agricultural and non-agricultural products. Most of them (about 96%) are freely exportable except few products appearing in prohibited/restricted list). Such lists are available on DGFT's website.

To select your products for export, first you should make a list of potential products which you know about. Then collect export/import data of your products from various websites of government institutions, EPCs and private information providers. All the exportable products have been classified according to international standards. In India, 8 digit ITC (HS) Code is used for this purpose.

ITC (HS) code

ITC (HS) codes are better known as Indian Trade Classification (ITC) and are based on Harmonized System (HS) of Coding. It was adopted in India for import-export operations. The Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS) of tariff nomenclature is an internationally standardized system of names and numbers to classify traded products. It came into effect in 1988 and has since been developed and maintained by the World Customs Organization (WCO) an independent intergovernmental organization based in Brussels, Belgium, with over 200 member countries.

Fundamentally, the HS is organized logically by economic activity or component material. The HS is organized into 21 sections, which are subdivided into 98 chapters. The 98 HS chapters are further subdivided into approximately 5,000 headings and subheadings. Section and Chapter titles describe broad categories of goods, while headings and subheadings describe products in more detail. Generally, HS sections and chapters are arranged in order of a product's degree of manufacture or in terms of its technological complexity. Natural commodities, such as live animals and vegetables, for example, are described the early sections of the HS, whereas more evolved goods such as machinery and precision instruments are described in later sections. Chapters within the individual sections are also usually organized in order of complexity or degree of manufacture.

The World Customs Organization (WCO) has been administering 6 digits HS codes schedule. The HS codes have been being used by 98% of Import Export trade all over world. The first two digits designate the HS Chapter. The second two digits designate the HS heading. The third two digits designate the HS subheading. HS code 100630, for example, indicates Chapter 10 (*Cereals*), Heading 06 (*Rice*), and Subheading 30 (*Semi-milled or wholly milled rice, whether or not polished or glazed*).

However, each country can modify by adding two digits or four digits as per their requirements without changing first six digits. In other words, first six digits of HS code (HTS code) are same in all countries. For example United States uses 10 digits codes whereas India uses 8 digits code. For example, ITC (HS) Code for Mango Fresh is 08045020 which indicates Chapter No (08), Heading (04), Subheading (50) and Country code (20).

Since its creation, the HS has undergone several revisions - ostensibly, to either eliminate headings and subheadings describing commodities that are no longer traded, or to create headings and subheadings that address technological advancements and environmental concerns. The latest version of the HS effective from January 1, 2017 is available on DGFT's website. ITC (HS) Code of fruits and vegetables is give in Appendix -I.

How to find HS code for a product you wish to export/import?

- Visit DGFT website
- Go to Policies
- Download "ITC (HS) 2017"
- Find appropriate Section. Find appropriate Chapter heading. Look into sub headings and finally find 8-digit ITC(HS) Code of your product.
- Visit EPC's website and find list of products along with their HS Code.
- Or you may use Google Search.

Know about export/import policy of your product

- Visit DGFT website.
- Go to Policies
- Download "Foreign Trade Policy (FTP) Schedule-2 (Export Policy).
- Verify whether the product you selected for export is " free to Export" or it lies under "Restricted" or "Prohibited" Categories.
- Restricted category indicates that certain approvals from concerned government department are required to export such product or only government agency can export it.
- Prohibited category indicates that such product cannot be exported.

8. 5 Selection of Overseas Markets

There are numerous accessible markets worldwide that seem to offer a high potential for exports, however the real questions are; how to select your market and how to target it smartly. Statistical data analysis is essential when selecting the market. You can obtain useful information from various free and paid sources. Some B2B companies are able to provide you with very specific export/import data about products similar to yours and about the most popular markets, at a price.

Sources of Market Information

- Keep informed. Read everything you can find about world trade.
- Use Internet as it is a great source of information.

- Visit www.commerce.nic.in, www.icegate.gov.in, www.cdec.gov.in or any B2B portals which provide such data.
- Collect product-wise and country-wise export data using HS Code.
- Study the EPCs Market Reports and New Letters
- Study the various research bulletins of reputed national/ international journals.
- Look at trade publications, international newspapers, news magazines, and financial reports. Who is selling what to whom?
- Read global surveys and ocean freight guidelines.
- Become familiar with the global market trend, current regulations and government promotional facilities.
- Use your personal source of information.

Table 8.1 Sources of market information

Government Sources	Government websites / EPCs website and newsletter
	Consulate General / Commercial Missions abroad
	Foreign Government's Trade Centers in India
	International / Regional Organizations Like WTO, SARC
Private Sources	Trade directories like SESA
	Trade and Business Associations
	Trade Journals
	B2B Portals
	Suppliers and Customers
	Consultants and Research Agencies
Primary Research	Personal Visits / Trade Fairs
	Survey and Product Reports

Study FTAs /PTAs to be more competitive

A Free Trade Agreement (FTA) and Preferential Trade Agreement (PTA, limited FTA) is usually an agreement between two or more countries where partner countries exchange trade concessions in goods and services. There are 398 FTAs/RTAs in force in the world as per WTO Reports. India too has entered into 10 FTAs (18 countries) and 6 PTAs (50 countries), 1 unilateral scheme for LDCs (49 countries), for easing exports from India, easier cheaper access to imported raw materials, fuels, intermediate and capital goods for domestic industry. India has another 17 Agreements under negotiations.(43 countries). Changes in duties affects and shape competition and business growth in very significant ways and a careful analysis and deeper understanding of the current provisions and future trends is essential in today's free market trade environment to maximise profits. Issues usually discussed under these agreements cover customs duty elimination or reduction, removal of quantitative restrictions, easing of customs procedures, improved market access, movement of people and investment treatment. Other issues include standards, rules of origin, dispute settlement, TBTs, IPR, Government procurement rules.

Table 8.2 Free trade agreements (FTA) and preferential trade agreements (PTA)

S. No.	Acronym	Groupings	Member Countries	
			No	Names
Free Trade Agreements (FTA)				
1	SAFTA	South Asia Free Trade Agreement	7	India, Pakistan, Nepal, Sri Lanka, Bangladesh, Bhutan and the Mal-dives
2	ISLFTA	Indo Sri Lanka FTA	2	Sri Lanka, India
3	IMCECA	Indo Malaysia CECA	2	Malaysia, India
4	ISCECA	India Singapore CECA	2	Singapore, India
5	JICEPA	Japan India CEPA	2	Japan, India
6	IKCEPA	India Korea CEPA	2	South Korea, India
Preferential Trade Agreements (PTA)				
1	APTA	Asia Pacific Trade Agreement	5	Bangladesh, China, India, Re-public of Korea, Sri Lanka.
2	GSTP	Global System of Trade Preferences	44	Algeria, Argentina, Bangladesh, Benin, Bolivia, Brazil, Cameroon, Chile, Colombia, Cuba, Demo-cratic People's Republic of Korea, Ecuador, Egypt, Ghana, Guinea, Guyana, India, Indonesia, Iran, Iraq, Libya, Malaysia, Mexico, Morocco, Mozambique, Myanmar, Nicaragua, Nigeria, Pakistan, Peru, Philippines, Republic of Korea, Romania, Sin-gapore, Sri Lanka, Sudan, Thailand, Trinidad and Tobago, Tunisia, Tan-zania, Venezuela, Viet Nam, Yugo-slavia, Zimbabwe.

3	BIMSTEC (Under nego-tiations)	Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Cooperation	7	Bangladesh, India, Myanmar, Sri Lanka, Thailand, Bhutan and Nepal.
4	IBSA (Under nego-tiations)	India Brazil and South Africa	3	India, Brazil and South Africa.

Source: www.indiatradeportal.in

Generalized System of Preferences (GSP)

GSP is a non-contractual instrument by which industrialised (developed) countries unilaterally and based on non-reciprocal extend tariff concessions to developing countries. This includes New Zealand, Belarus, European Union, Japan, Russia, Canada, Norway, Switzerland and Bulgaria.

Key Points for Market Selection

- Know the market's requirements
- Assess your target customers
- Examine your competitors
- Be prepare to compete against lower-cost, lower-priced local companies
- Rapidly growing markets, such as China and South East Asia are better targets for your initial exports than developed European countries.
- Evaluate the markets based on the export benefits available for few countries under the FTP and various Free Trade Agreements to know comparative advantage.
- Visit www.wto.org for WTO Agreements.
- Visit www.indiatradeportal.in for FTA and PTA
- Visit www.dgft.gov.in for Export Benefits (MEIS/SEIS)
- The right selection of export market is a thoughtful exercise.

Understand every market is different and changes every few years

We have deliberately emphasised this issue as a separate topic. To disregard it is one of the most common failures in International Trade. Your products may be in high demand in one market and be absolutely unsalable in another. Packaging you have introduced for your US customers will most likely be unattractive for potential Indonesian customers. Without an understanding of market trends and demands, their nuances and uniqueness, business traditions, culture and people's mentality it will be "mission impossible" to successfully develop that market.

You also need to understand that every market changes every few years. Technology, globalisation, privatisation, lifting of trade barriers and softing of import/export regulations are major factors which affect International Trade. And while you might think that these factors are too hard to keep in mind when considering your offshore activities, they can certainly influence each market radically and you may need to adjust your marketing and export strategies according to the current situation in each market.

Be prepared to customise your products to meet customers' needs and demands

Domestic success of your products doesn't necessarily mean global success. For example, the major competitive advantage of Australian juice in Russia was the packaging - it was the only juice on the market packed in plastic bottles. However, after several months of sales it was discovered that the target audience was limited... due to the packaging. Ninety per cent of end-users simply could not afford to buy a 2L bottle. Looking to customer's need 1L PET packaging was launched. After that the export sales increased by 80% within six months.

8.6 How to find Overseas Buyers ?

Key Points

- **Create your multilingual website with product catalogue**: Having a dynamic corporate web site is a "must" for International Trade. Nine out of ten of your potential buyers will seek and learn about your company and its products through the Internet prior to actually approaching you and if they can't find or are not impressed by your web site, they may very likely choose and deal with your competitors. Provide compete and comprehensive information about your products and indicate your general terms of trade on your web site. Provide visitors with direct contact details. Introduce a facility to receive export inquiries. Develop an attractive web site which will not only represent your company and products but also save your time and money.
- **Take advantage of free advertisement on Internet**: There are numerous free online trade boards, import-export directories, forums, etc. Spend some time and post online offers on these sites. Not only will it increase your chances of being found by potential buyers but will also add value to your web site's Search Engine ranking.
- Register with various **B2B portals.**
- Visit websites of concerned **EPCs** regularly. Follow trade leads and other related information provided by EPCs.
- Participate in **international trade fairs** and **buyer seller meets.**
- Get help of your **relatives** staying abroad.
- Contact **agents** of foreign buyers in India.

- Appoint an **overseas agent** in buyer's country.
- Contact **Indian Missions** abroad.
- Contact Overseas Chambers of Commerce

8.7 Export Pricing and Costing

Pricing and costing are two different things and an exporter should not confuse between the two. Price is what an exporter offer to a customer on particular products while cost is what an exporter pay for manufacturing the same product.

Export pricing is the most important factor in for promoting export and facing international trade competition. It is important for the exporter to keep the prices down keeping in mind all export benefits and expenses. However, there is no fixed formula for export pricing. The price for the same product may vary significantly in different markets and most likely there can be several prices for the same product depending on various factors viz., marketing strategy, product uniqueness, quality, brand recognition, quantity, market demand and target customers. The price may differ from exporter to exporter depending upon whether the exporter is a merchant exporter or a manufacturer exporter or exporting through a canalising agency.

How a product is priced is crucial in getting the buyer's attention, before the buyer becomes familiar with the quality of your product, delivery and service. In competitive environment, lower price helps in maximizing sales.

The "green and clean" image of your product is a great competitive advantage. You may be surprised to hear that in International Trade the price is not really high in the decision making process. If you sell FMCG you will know that usually, packaging is the first priority followed by quality and then price.

Determining Export Pricing

Export Pricing can be determined by the following factors:

- Range of products offered.
- Prompt deliveries and continuity in supply.
- After-sales service in products like machine tools, consumer durables.
- Product differentiation and brand image.
- Frequency of purchase.
- Presumed relationship between quality and price.
- Specialty value goods and gift items.
- Credit offered.
- Preference or prejudice for products originating from a particular source.
- Aggressive marketing and sales promotion.

- Prompt acceptance and settlement of claims.
- Unique value goods and gift items.

Export Costing

Before quoting price to overseas buyer, exporter should carefully work out all expenses. Export costing is basically Cost Accountant's job. It consists of fixed cost and variable cost comprising various elements viz., cost of production or purchase price, cost of grading-packing, storage, inspection/certification charges, banking charges, commission of agent, payment terms, interest on working capital etc. Whereas cost of transportation to port/airport, main carriage charges (ship or air cargo), cargo insurance, custom clearance etc. will depend on export destination/market and delivery terms called INCOTERM. It is advisable to prepare an export costing sheet for each product, market and INCOTERM. It will help exporter to quote the price according to the buyer's need.

8.8 INCOTERMS 2010

To avoid conflicts and difficulties, importers and exporters – or buyers and sellers – must have a common understanding of the terms and conditions under which they trade. International Commercial Terms, known as "INCOTERMS", are internationally accepted delivery terms defining the responsibilities of exporters and importers in the arrangement of shipments and the transfer of liability involved at various stages of the transaction.

Table 8.3 INCOTERMS 2010

Group	Term	Stand for	Mode of Transport			
			Land	Ocean	Air	Multi
E	EXW	Ex Works	√	√	√	√
F	FCA	Free Carriage	√		√	√
	FAS	Free Alongside Ship		√		
	FOB	Free On Board		√		
C	CFR	Cost and Freight		√		
	CIF	Cost Insurance and Freight		√		
	CPT	Carriage Paid to	√		√	√
	CIP	Carriage and Ins. Paid To	√		√	√
D	DAT	Delivered At Terminal	√	√	√	√
	DAP	Delivered At Place	√	√	√	√
	DDP	Delivered Duty Paid	√	√	√	√

Developed and administered by the International Chamber of Commerce in Paris (ICC), INCOTERMS are universally recognised and adhered to by the major trading nations of the world. The first version of INCOTERMS was introduced by ICC in 1936, and has been edited and updated six times since. The latest edition of which came into force on 1 January 2010, is known as INCOTERMS 2010. There are currently 11 INCOTERMS in use and they are categorised in four groups, designated by the first letter of the term (acronym), as follows:

All the current INCOTERMS are described below. However, EXW, FOB, CIF and CIP are the most frequently used in export import.

Group E - Departure

Under EXW you - the Seller - minimise the risk by only making the goods available at your own premises.

(1) EXW – Ex Works (... named place)

EXW represents minimum involvement of seller and the maximum involvement of the buyer in the arrangement of the transportation of the goods from seller's premises (factory, warehouse etc.). When EXW is used, you should remember that the export of the goods is NOT guaranted and the buyer may, for example, keep the goods in seller's country and/or re-sell it to a third party.

Group F - Main Carriage Not Paid By Seller

Under F Terms you - the Seller - arrange and pay only for the pre-carriage in the country of export and not for main carriage.

(2) FCA - Free Carrier (...named place)

FCA requires seller to take responsibility for all risks and costs until the goods are delivered to the named place and collected by the carrier nominated by the buyer. Under FCA seller is responsible for the export customs clearance. The carrier may be responsible for collecting the goods from seller's premises or seller may be responsible for delivering the goods to the carrier, dependent on the agreed conditions. The buyer is responsible for loading the goods.

(3) FAS - Free Alongside Ship (...named port of shipment)

Under FAS, seller must deliver the goods to the named port and place them alongside the ship. Seller is responsible for the export customs clearance and the buyer - for loading the goods onto the vessel.

(4) FOB - Free On Board (...named port of shipment)

FOB is one of the most common terms used in international trade. Under FOB seller is responsible for delivering goods to the named port, export customs clearance and loading them onto the vessel. If during the loading onto the ship, the goods would fall on the wharf or into the water, you seller is responsible for losses, but if the goods fall on the deck of the ship, the losses are the buyer's responsibility.

When the F Terms are used, you should remember that:

- FAS and FOB are mono-modal terms and can only be used when the main carriage is by sea freight.
- Under FOB you are responsible for handling, loading, stowage and other port charges, while under FCA, these charges are for the buyer's account.

Group C - Main Carriage Paid By Seller

Under C Terms, the Seller arranges and pays for the main carriage but without assuming the risk of the main carriage.

(5) CFR - Cost and Freight (...named port of destination)

Under CFR, seller is responsible for export customs clearance, delivering the goods to the named port of destination and unloading the goods from the ship, including all port charges.

(6) CIF - Cost, Insurance and Freight (...named port of destination)

CIF is very similar to CFR with the addition of insurance to seller's responsibilities.

(7) CPT - Carriage Paid To (...named place of destination)

Under CPT, seller is responsible to deliver the goods to any place nominated by the buyer in the country of destination. Although seller is responsible for inland freight in the buyer's country, the buyer is responsible for the import customs clearance and all duties, taxes and other costs in the country of destination.

(8) CIP - Carriage and Insurance Paid to (...named place of destination)

CIP is very similar to CPT with the addition of insurance to your responsibilities.

When the C Terms are used, you should remember that:

- CFR and CIF are mono-modal terms and can only be used when the main carriage is by sea freight. It is a common mistake when, under these terms, the place located in a middle of continent is named as a port of destination. Terms "CFR Vienna" and/or "CIF Moscow" are incorrect terms.

- CIF and CIP are the only two terms, under which you are compulsorily responsible for insurance. Under all other terms, the buyer considers insurance as an optional responsibility.
- C Terms are quite different from other Incoterms. They are the only terms when the point of transferring costs responsibilities and the point of transferring risks are segregated. In other words, although you are responsible for costs until the goods arrive to the named port or place of destination, the risks shift to the buyer at the port of loading or even earlier, when the goods are delivered to the carrier. If it was agreed that the carrier is collecting the goods from your premises then the risks transfer to the buyer at that point.
- From these perspectives, the C Terms are much more beneficial for you than for your buyer, as you select the carrier and control the costs and timing of the main carriage without undertaking any risks, while the buyer takes all risks for a period of main carriage during which he/she has no means of controlling or limiting those risks.

Group D – Arrival

Under D Terms, the Seller's cost/risk is maximised because he/she must take the goods available upon arrival at the agreed destination.

(9) DAT - Delivered At Terminal (...named port)

Under DAT, seller bears cost, risk and responsibility until goods are unloaded (delivered) at named quay, warehouse, yard, or terminal at destination. Demurrage or detention charges may apply to seller. Seller clears goods for export, not import.

(10) DAP - Delivered At Place (...named place)

Under DAP, seller bears cost, risk and responsibility for goods until made available to buyer at named place of destination. Seller clears goods for export, not import.

(11) DDP - Delivered Duty Paid (...named place of destination)

Under DDP seller is responsible for all costs and risks involved in delivering the goods to a named place of destination, import customs clearance and other payments of domestic duties in the buyer's country. Buyer is responsible for unloading only. Literally, seller provides "door-to-door" delivery and bears the entire risk of loss until goods are delivered to the buyer's premises.

Sr No	INCOTERMS 2010	Responsibility in Export Contract								
		In Seller's Country					In Buyer's Country			
		Trans-port to Port	Custom Clear-ance	Loading and Terminal Handling	Freight of Main Carriage	Marine Insur-ance	Unload-ing and Terminal Handling	Custom Clear-ance	Trans-port to buyer's premise	Miscel-laneous expenses
1	**EXW** Ex Works									
2	**FCA** Free Carriage									
3	**FAS** Free Alongside Ship									
4	**FOB** Free On Board									
5	**CFR** Cost and Freight									
6	**CIF** Cost Ins. and Freight									
7	**CPT** Carriage Paid to									
8	**CIP** Carriage and Ins. Paid To									
9	**DAT** Delivered At Ter-minal									
10	**DAP** Delivered At Place									
11	**DDP** Delivered Duty Paid									

Seller's Responsibility **Buyer's Responsibility**

Fig 8.1 INCOTERMS 2010 and distribution of responsibility in transportation of goods

8.9 Payment Terms

You have made an outstanding deal, but if you haven't been paid – you have lost. That's why setting up the right terms of trade (payment term) is a crucial part of your exports. When negotiating the terms of payment you always face a dilemma:

- If you insist on more secured payment terms, you may very well reduce your sales opportunities
- If you agree on more flexible payment terms, you run a high risk of the payment being delayed or refused.

So, appropriate selection of payment terms is must which can significantly minimise risks and have no adverse effect on sales.

Various payment terms used in export contracts are as under.

1) Advance Payment
2) Letter of Credit (LC)
3) Documentary Collection (Draft)
    a. Sight Draft (Documents against Payment - DP)
    b. Time Draft (Documents against Acceptance -DA)
4) Open or Ongoing Account
5) Consignment Sale
6) Mixed Payments
7) Counter Trade / Counter Purchase

Cash in Advance

If your buyer is prepared to pay you in advance – you are lucky – you have the money and you still have total control of your goods - you risk nothing at all. However, unless you are a well-known company with established brands, buyers will not accept these terms, at least not for a new transaction. They would have the same doubts as you do – will I get my goods after I have paid?

Don't press your buyer for cash in advance, unless you know that you might experience difficulties in selling the goods to another customer if the deal is cancelled. If your goods are non-standard or goods you are selling need to be specifically customized, the best way to secure the payment is to have money in your bank account prior to commencing customisation.

Letter of Credit (LC)

An Exporter if dealing with an unknown customer at the other end may not have any prior exposure to the credit worthiness of the Customer and would normally insist on Confirmed Letter of Credit to be opened by the Customer before shipping the goods.

In case of high value transactions with known customers too; exporters prefer to get paid through Letter of Credit.

Documentary Collection (Bill of Exchange / Draft)

When there has been sufficient relation between an Exporter and the Customer (Importer) and the customer's credit worthiness is known through previous records, the Exporter might decide to extend credit and accept payment on bill of exchange basis. This system is also called as Documentary Drafts.

Documentary Collection or Draft is the term when you ship the goods before the payment is made and then draw a draft on the buyer, not on the bank, like under L/C. Under documentary collections banks have no responsibility for the payment.

There are two types of documentary collections - sight draft, also know as "Documents Against Payment", and time draft, also known as "Documents Against Acceptance".

Sight Draft (Documents against Payment - DP)

"Sight draft" is payable by the buyer immediately after notification by the buyer's bank of the receipt of the draft and transport documents.

Under this method of payment you (the Drawer) negotiate the terms with the buyer (the Drawee), specify the documents required for the payment, ship the goods and draw the draft on the buyer. The draft and the documents required for the payment are presented to your bank (Remitting Bank) and after examination are forwarded to the buyer's bank (Presenting Bank). The Presenting Bank holds the title documents (usually the transport documents) and will release them to the buyer only after the payment was made. Sight draft procedure is shown in Fig 8.2.

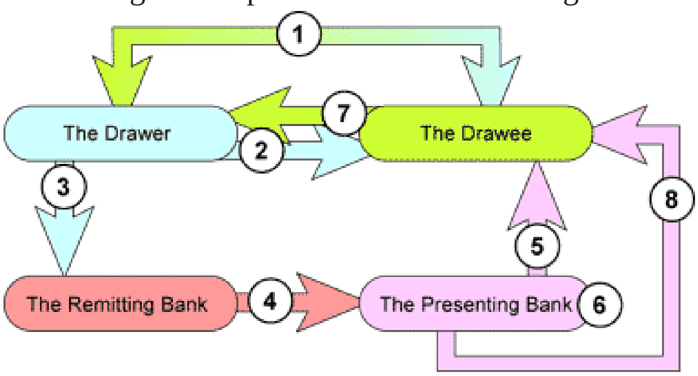


Fig 8.2 Process of payment under Sight Draft

1. The Drawer and the Drawee negotiate terms and conditions of the transaction
2. The Drawer ships the goods
3. The Drawer draws a draft and presents it to the Remitting Bank along with other documents

4. The Remitting Bank examines the documents and the draft and forwards them to the Presenting Bank
5. The Presenting Bank notifies the Drawee of receipt of the documents
6. The Presenting Bank holds the documents until the payment is made by the Drawee
7. The Drawee examines the documents and makes the payment for the supplied goods
8. The Presenting Bank releases the documents to the Drawee

Sight drafts have some similarity with L/C. You deal with documents and through banks, and the buyer cannot take the possession of the goods before the payment is occurred.

However, the payment is not guaranteed. If the buyer for any reason refuses to pay, you have to deal with goods “on the water” or stacked in the customs zone in a foreign country. It can be very costly to ship your goods back or to sell them urgently. In both cases, there are substantial additional expenses (warehousing, cost of transportation to a new destination, significant discount, etc.). In some cases, the buyer who failed to pay was one of the bidders at the resulting auction and had bought the goods for a fraction of the initial price.

It is also possible, that the buyer will delay the payment. Although legally the payment has to be made immediately upon receipt of the draft by the buyer’s bank, the buyer may hold the payment until the goods are delivered.

Time Draft (Documents against Acceptance - DA)

Unlike the sight draft, when dealing with time drafts, the buyer may take possession of the goods before the payment. Under the time draft, you agree on a deferring period, ship the goods and draw a draft. For the title documents to be released, the buyer has to accept the draft by issuing written evidence of his willingness to pay on the agreed maturity date (usually by signing and dating the draft).

Dealing with the ‘time draft’, always draw a draft against the certain date specified in the other document. (For example, “Payable at 60 days after invoice date/bill of lading date/the draft date”)

The time draft, in fact, is very similar to “open account” terms – you have no control over the goods, nor over the payment. The only difference is that, in addition to the contract of sale, you have the buyer’s written guarantee to make a payment on a certain date. You have to rely on the buyer. The consequences of the refusal to pay are the same as the consequences of the refusal to pay under “open account” (see below).

Drafts are normally issued in a set of two (First of Exchange and Second of Exchange) or singly (Sola Bill of Exchange). Two drafts are usually drawn to ensure that at least one draft reaches the Drawee when they are dispatched separately. When two drafts are issued they may be numbered "1" and "2" and marked "First of Exchange (Second Unpaid)" and "Second of Exchange (First Unpaid)".

Documentary collection is cheaper then L/C but the risk involved is much greater, especially with the time draft. This term is normally not recommend, unless you are dealing with a well-known trusted buyer or the transaction is insured.

Open or Ongoing Account

When there is a huge volume of continuous business transactions between the Exporter and Importer and exports continue to happen on ongoing basis, the Exporter can simply export on the basis of a purchase order and expect the Importer to pay promptly on due date. This is the usual method adopted by most of the Multi National Companies as well as the large organizations that have sufficient import volumes spread across various countries and are dealing with multiple vendors on ongoing basis. In such cases they just determine the annual volumes to be supplied by each vendor, issue an open purchase order and keep reviewing only the delivery schedule. They offer standard payment commitment on a particular date to all vendors as a global policy. The payment process will be set and determined as a part of their business agreement.

Consignment Sale

An exporter might sign up a contractor with a distributor overseas to import, hold stock and sell the goods on his behalf. In such a situation, the distributor may not own the stocks and the ownership might continue to lie with the exporter. The distributor would only be an intermediary to sell the stocks and repatriate the money realized back to the exporter and get remunerated in terms of service charges or commission. In such cases there may be a business agreement in place but no fixed payment mechanism may be adopted.

Open Account and Consignment are the most risky payment terms – you ship the goods before the payment is made and don't have any control over the goods or over the payment. You totally rely on the buyer and if the payment has been refused, legal action is the most likely scenario. This usually involves not only significant legal fees but also your time and energy and there is no guarantee that you will recover your money.

The difference between Open Account and Consignment is that sending goods on open account you usually agree on a deferred period of time after which the buyer will pay you in total.

When dealing with the consignment, the goods are shipped but not sold. Legally, you have the title over the goods until you have been paid. Depending on the agreed terms, the buyer can pay upon the sale of all goods or make periodic payments for goods that have been sold by the end of the set period.

Mixed Payments

Quite often you can compromise with the buyer by using different terms of payment for one transaction. Remember that when you insist the buyer pay in advance when the goods are required to be customised? "Cash in advance" is the least preferred term for the buyer. The solution is mixed payments. You estimate the cost involved in customisation, which has to be prepaid and the balance may be payable under different terms, L/C, for instance.

When you experience difficulties with cash flow and do not have available funds to prepay freight and other pre-shipment expenses, you also may consider mixed payments. Using mixed payments, you can avoid losses, which occur when the buyer refuses the payment under the sight draft. If the mixed payments were negotiated, the proportion has to be clearly indicated in the contract of sale. For example, terms of payment may be 20% cash with the order and remaining 80% by irrevocable Letter of Credit confirmed by first class bank and payable at sight.

Counter Trade / Counter Purchase

In yet another case of business arrangement called counter trade, exports may be linked with return purchase of some other items from the importer or from another source in the country. The payment may also involve services other than products. This kind of trade becomes a necessity while dealing with countries that do not have sufficient foreign currency.

8.10 Letter of Credit (LC)

Letter of Credit (LC) has been a cornerstone of international trade dating back to the early 1900s. It continues to play a critical role in world trade today. For any company entering the international market, LC is an important payment mechanism which helps in eliminating certain risks.

LC is a written instrument issued by a bank at the request of its customer, the Importer (Buyer), whereby the bank promises to pay the Exporter (Beneficiary) for goods or services, provided that the Exporter presents all documents called for, exactly as stipulated in the LC and meet all other terms and conditions set out in the LC. LC is also commonly referred to as Documentary Credit.

LC is the most used payment term in International Trade. LC is a perfect procedure to equally protect your interests and your buyer's interests. Using LC as a term of payment, your risk as exporter is almost nothing and at the same time it ensures the buyer that goods are shipped before the payment has occurred. However, you only will be paid if all terms stipulated in the LC are met and all documents specified in the

LC strictly comply with agreed conditions and are presented in time.

For you as an exporter, LC is one of the best methods after advance mode of payment for any business transaction as buyer's bank guarantees payment to exporter through his bank on presentation of required documents as per LC.

The International Chamber of Commerce (ICC) publishes internationally agreed-upon rules, definitions and practices governing Letters of Credit, called "Uniform Customs and Practice for Documentary Credits" (UCP). The UCP facilitates standardization of LC among all banks in the world that subscribe to it. These rules are updated from time to time; the last revision became effective from January 1, 1994, and is referred to as UCP 600.

There are various types of LC which are explained as under.

Revocable LC and Irrevocable LC

A **revocable** LC may be amended or cancelled by the Issuing Bank at any moment and without prior notice to the Beneficiary. This is as simple, as that. Never accept this form of LC in your export arrangements.

An **irrevocable** LC cannot be cancelled or changed without the consent of all parties, including the Exporter. Although UCP 600 requires that LC should indicate whether it is revocable or irrevocable, it also says "in the absence of such indication, the LC shall be deemed to be irrevocable."

Confirmed LC and Unconfirmed LC

When you export to a country with economical or political instability or if you are unfamiliar with the Issuing Bank, you should require that the LC be confirmed by a first-class bank. If LC is confirmed, the confirming bank is liable for the payment.

Transferable LC

Transferable LC is a perfect financial tool for middlemen to secure their margin without involving any funds. It allows dealing with more than one beneficiary. When a transferable LC is issued in your favour, you can transfer it to your seller and use it as a payment.

LC can be transferred only if it is specially designated as "transferable". Transferable LC must correspond with the original LC with the exception of the amount of the LC, any unit price, the expiry date, the last date for presentation of documents, the period for shipment, any or all of which may be reduced or curtailed.

At sight LC and Usance / Deferred LC

"Payable at sight" means that you will be paid "immediately" (in fact, it may take up to 7 days) after presentation of the documents stipulated in the LC to the Issuing Bank or to the Confirming Bank if it was confirmed.

If deferred payment was agreed, you will be paid on the maturity date indicated in the LC after presentation of the documents stipulated in the LC to the Issuing Bank. Don't forget to specify the date from which the deferring period starts (e.g. 60/90/120 days after date of transport document).

The bill of exchange (the draft)

The bill of exchange (the draft) is an unconditional order in writing, signed and addressed by the drawer (you) to the drawee (the paying bank), requiring the drawee to pay the drawer a certain sum of money according to the terms of the LC. Under LC, always draw the draft on the bank, not on the buyer.

Advantages of LC to exporter

1) The major advantage of LC to exporter is minimizing of credit risk. In an import and export trade, the geographical distance between importer and exporter is very far; hence ascertaining credit worthiness of buyer is a major threat. In a mode of Letter of Credit, such risk can be avoided.
2) Buyer cannot deny payment by raising dispute on quality of goods, as LC terms and conditions are based on documentation. Some of the fraudulent buyers deliberately delays or hold payments by complaining on quality of goods. In LC terms of business transactions, rejection of export payment by raising complaint on quality of goods cannot be effected.
3) LC provides a security to exporter based on which, the exporter can pre-plan his further business activities to strengthen his/her business world.
4) Any dispute in transaction can be settled easily, as LC terms and conditions are under the guidelines of uniform customs and practice of documentary credit.
5) Against a LC, an exporter can avail pre-shipment finance from banks or other financial institutions. Many banks extend financial assistance with minimum bank interest, as LC is a 'safe export order'.
6) Assurance to receive money in full and in Time.
7) Normally, under a non LC business term, the buyer may keep on changing delivery schedule as per their requirements time to time. So this change of delivery schedule at importer's interest leads exporter to rearrange his overall daily business activities.

Disadvantages of LC to Exporter

1) While accepting LC, the exporter guarantees to meet the requirements of buyer as mutually agreed as per the terms and conditions mentioned in LC. So the liability of meeting all required parameters are with exporter failing which bank may not accept documents under such transaction.
2) Bank may debit certain charges against the discrepancy of documents also if proper

documentary proof has not been submitted along with other shipping documents. So, if the exporter does not follow strictly with the terms and conditions of LC with 100% compliance of documentation, the payment will not be effected by bank.

3) A best caliber of personnel is required to monitor and navigate the process of LC to provide no room for even minute discrepancy of documents.

4) In LC, the exporter receives payment after shipment. So, if any loss due to fluctuations in foreign currency needs to be beard by exporter.

Advantages of LC to buyer/Importer

1) While accepting LC, the exporter guarantees to meet the terms and conditions of LC with documentary proof. LC opening bank remits amount only after satisfaction of all terms and conditions of LC with documentary proof. This arrangement protects importer and provides security of shipment to him and reduces the risk of non-performance by the exporter.

2) In LC, bank acts on behalf of buyer. This minimizes time of buyer.

3) Unlike other shipments, a shipment under LC is treated with most care to meet delivery schedule and other required parameters by the exporter. The buyer receives the documents promptly and quickly with complete sets. Unless meeting delivery schedule and prompt documentation, the exporter does not get his/her payment from opening bank.

4) Based on timely delivery schedule, buyer receives goods on time thereby he can execute his business plan smoothly and efficiently, in turn satisfying his/her clients promptly and effectively.

Demerits of LC to Importer

1) LC is operated on the basis of documentation and not on the basis of physical verification of goods.

2) The parties under LC do not have any right to physically verify the contents of goods. So, if the buyer needs to confirm and satisfy on the quality of goods he buys, he can appoint an inspection agency of international repute and instruct exporter to enclose certificate of such inspection by mentioning a condition in LC.

3) Once opened a confirmed and irrevocable LC, the buyer already tied up with the said business credit line and cannot change in between. Due to various reasons, especially on selling price variation, if buyer needs to stop his/her export order he/she cannot do so.

4) Compared to other payment mode of transactions, cost of operating LC procedures and formalities are more, which may be an additional expenses to an importer especially on amendment, negotiation etc.

5) Currency fluctuation is another disadvantage of LC. Normally buyer/importer places purchase orders once in a year and opens LC accordingly. The exchange rate may differ at the time of effecting payment. So, if any loss due to fluctuations in foreign currency contracted under letter of credit, need to be beard by him.

How LC works?

There are at least four participants, when dealing with LC:

- The buyer – the Applicant
- The Exporter - the Beneficiary
- Bank, the payment will come from – the Issuing Bank
- Bank, the payment will go to – the Advising Bank.

Fig 8.3 shows how participants are involved in the process of payment under LC.

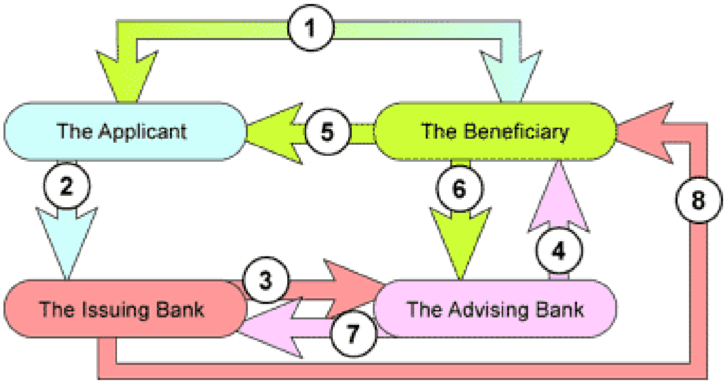


Fig 8.3 Process of payment under LC

1) The Applicant and the Beneficiary negotiate terms and conditions of the LC.
2) The Applicant applies to the Issuing Bank to issue the LC.
3) The Issuing Bank issues the LC and forwards it to the Advising Bank.
4) The Advising Bank checks the apparent authenticity of the LC and advises the LC to the Beneficiary.
5) The Beneficiary checks if the LC complies with the commercial agreements and if all terms and conditions specified in the LC can be satisfied.
6) The Beneficiary assembles the documents specified in the LC, checks the documents for discrepancies with the LC, draws the draft and presents.
7) The Advising Bank bears the draft and the documents against terms and conditions of the LC and forwards them to the Issuing Bank.
8) The Issuing Bank checks if the documents comply with the LC and makes a payment immediately (if the LC is available by sight) or on a certain date (if LC is available by deferred payment).

Parties, which may be involved in the LC procedure, are shown in Table 8.4.

Table 8.4 Various parties involved in LC procedure

Applicant	Importer/Buyer - The party that has contracted to buy goods.
Beneficiary	Exporter/Seller - The party that has contracted to sell goods.
The Issuing Bank	The Issuing Bank issues the LC on behalf of the Applicant (Buyer) and forwards it to the Advising Bank. Or it may authorise the Nominated Bank to negotiate the drafts and/or documents. Negotiation means that the nominated Bank – in this case the Negotiating Bank - gives value to such draft(s) and/or documents, not just examination of the documents.
The Nominated Bank	The Nominated Bank is the bank, which is authorized by the Issuing Bank to pay, to incur a deferred payment undertaking, to accept Draft(s) or to negotiate.
The Advising Bank	The bank to which the Issuing Bank forwards the LC with instructions to notify the Exporter (Beneficiary).The Advising Bank advises you that a LC is received and available to you and informs you about the terms and conditions of the LC. The advising bank is not responsible for the payment of the LC. The Advising Bank is not necessarily a bank where you usually banking. Try to find a bank, which has a corresponding bank in your buyer’s country and can offer you a better deal in terms of charges involved in the payment under LC.
Accepting Bank	The bank named in a term (usance) LC on which drafts are drawn that has agreed to accept the draft. By accepting the draft, the Drawee Bank signifies its commitment to pay the face amount at maturity to anyone who presents it at maturity. After accepting the draft, the Drawee Bank becomes the Accepting Bank.
“available with” Bank	The bank authorized in the LC to effect payment under, accept or negotiate the LC.
Confirming Bank	The bank which, at the request of the Issuing Bank, adds its confirmation to LC. In doing so, the Confirming Bank undertakes to make payment to the Exporter upon presentation of documents under the LC.
Drawee Bank	The bank named in the LC on which the drafts are to be drawn.
Reimbursing Bank	The bank designated in the LC to reimburse the “available with” Bank which submits payment claims under the LC.
Transferring Bank	The bank authorized by the Issuing Bank to transfer all or part of the LC to another party at the Beneficiary’s request.

Confirmation of LC

The confirmation of the LC by another bank - the Confirming Bank - means that if the Issuing Bank refuses to make the payment, the Confirming Bank is responsible for this payment.

If you are dealing with a buyer from a country with an unstable political or economical situation, always ask for the confirmation of the LC.

There are additional charges for the confirmation of the LC, which depend on the risk involved in dealing with the particular country. The responsibility to pay for the confirmation is negotiable and usually is paid by the buyer. However, if it was not agreed prior to the issuance of the LC, you are the one who will pay for this service.

8.11 How to get Export Order?

After getting a list of potential buyers, how to get export orders from them is the most difficult task which requires lot of efforts and passions.

Develop an export plan for each market

Your export plan should focus on the following tasks:

- Market Research
- Product Development
- Trade Regulations and Barrier Assessments
- Export Strategy
- Export Pricing
- Terms of trade and payments
- Logistics and distribution
- Financing
- After-sale strategy

Sending Samples

After getting genuine inquiry from any probable buyer, provide him customized samples which will help in getting export orders.

Some useful Tips for finding and Retaining Overseas Buyers

- ➢ Do your products require to be certified? Talk to your industry association; export authority or certification company representative and build a personal relationship.
- ➢ You will likely need insurance cover. Most major insurance companies deal through agents. Find an insurance broker, who deals with a reliable marine insurance underwriter, in your hometown and build a personal relationship.
- ➢ A responsible freight forwarder is a key player in your exports, find these under

Export Services. Pay a lot of careful attention to select a shipper for your goods and again build a personal relationship.

- When You Export - Market From Strength.
- Develop “Export Inquiries Handling Rules”.
- Respond in 48 hours, even better 24 hours
- Learn about cultural differences. You may offend your potential buyers if you fail to learn and understand cultural differences especially in the Middle East and Asia. For example, you should not ask about your host’s wife if you have been invited to visit your counterpart’s home in the Middle East. In Asia, if you are invited to a business lunch you should be prepared for a 1-2 hours conversation which has nothing to do with your prospective deal. You will be asked about your family, childhood, hobbies, favourite food, etc. and you should respond accordingly and ask similar questions. Asian people want to know whom they are dealing with before any business discussion begins.
- All verbal agreements must be confirmed in writing. This is one of the “golden rules” for your export operations.
- Be aware of frauds. There are people in international trade that are making a good living from fraudulent practices. The most known schemes are non-payment, sample scams and false complaints.
- False complaints about products or services are quite common and often hard to recognise as scams. The best way to protect your company against this problem is to include a very detailed “complaints reporting clause” in the contract.
- Be market and customer focused.
- Build a strong business relationship. Do not ignore small issues in building business relationships; it’s the little things that make the difference. If you send SMS or e-mail on major events and national holydays and on key personnel birthdays, it will add considerable value and strength to the relationship.
- Win buyers through better service.
- Remember that the key attributes of every service are:
    - Speed
    - Sincerity
    - Knowledge and
    - Problem solving
- Win and keep buyers through exceeding expectations. Philip Kotler, the author of several well-known marketing books said: “Meeting customer expectations

will only satisfy customers; exceeding their expectation will delight them". This is true. However, the pitfall is, that the better you act, the higher the expectations your customer will expect and one day you find that the task of exceeding the expectations will be too difficult and too costly. You should decide where to draw the line between exceeding the expectation and making a profit.

- Be prepared to meet growing demand. If you can't meet the demand you risk losing the whole market and your reputation. People are not interested in dealing with you if there is no future growth. Be ready to increase production, form alliances or source similar products elsewhere. But be sure they match your quality, service, prices and if possible branding.
- Be prepared to spend time and money**.** Generally, investments that you will need to make in international markets are greater than domestic investments. Exploring and researching foreign markets can take longer and cost more than expected. However the rewards are equally greater.
- Don't try too much at the beginning and don't grow too fast. Concentrate and succeed in one market at a time, moving to the next only after securing market share in the first. Be patient, wait until cash flow is strong enough to justify your expansion.

  If you carefully consider and take into account all the above issues then it is most likely that your products will be successful internationally and the demand for them will be grow significantly.

Preparing Proforma Invoice

Prepare and send Proforma Invoice to buyer indicating all details *viz.,* product specification, quantity, packing, price, delivery term, payment term, etc. to get confirmed order.

All international transactions are conducted according to the terms and conditions negotiated between you and your buyer. By negotiating terms you secure the deal, minimize risks and protect your company in case of possible trade disputes, claims and/or legal actions. Usually terms of trade are stipulated in the trade contract and clearly indicate your and the buyer's responsibilities.

In order to be effective and to promote certainty in your business relationship with your buyer, it is a good idea to provide for the following details of your deal in any trade contract:

- Date of Contract
- Seller's and Buyer's Names
- Product Name

- Product Description
- Packing
- Quantity
- Unit Price
- Terms of Delivery (Incoterms)
- Terms of Payment
- Delivery Date
- Validity

The contract should be signed by all parties directly involved in the contract. For example, if some responsibilities under the contract fall to a middleman, agent or other third party, this party should sign the contract together with you and the buyer.

The quote, which is written on the company letterhead and encloses all the above terms would generally become binding on you if it was accepted by the buyer in writing or simply marked “Accepted”, signed and forwarded back to you.

You have to be very accurate when issuing a quotation and you should always include a “Validity” condition. For example, “This quotation is valid for a period of XX days from the above date”.

Typographic errors and omissions of words may occur in the preparation of quotation. In practice, most buyers will unconditionally accept a revision in the event of an error and omission in the quotation. However, some buyers would take the error as is, if it is to their advantage and would force you to negotiate a more favourable price and/or conditions.

As a precautionary measure, it is worthwhile adding the acronym E.&O.E. stated for “Errors and Omissions Excepted” to your quotations to disclaim final responsibility for typographical errors and unintentional omissions.

Essential Terms

Seller’s and Buyer’s Names- Always stipulate the full legal name of your company. Also, you are required under the Corporations Act to quote your ACN or ABN on all documents. Check the name of your buyer’s company, especially when dealing with a foreign company for the first time.

Unit Price - Price stipulated in the contract must cover all expenses and risks as well as allow for the profit. At the end of the day, you are trading to earn some money.

Terms of Delivery (Incoterms) - Terms of Delivery must indicate the point of destination and should refer to the Incoterms. For example, “CIF Hamburg Incoterms 2010”.

Payment Terms - It is important to specify the terms of payment and payment procedure in detail as well as to stipulate all documents necessary to be presented for the payment to occur. Commonly, these details are specified in the appendix or supplement to the contract. In this case, under Payment Terms you should include, for example, "Irrevocable Confirmed Letter of Credit at sight in accordance with Supplement No. 1 hereto which is an integral part of the present contract".

Delivery Date - Indicate the delivery time as a reference to a certain date stipulated in the contract. It may be the date of the contract, but more appropriate the date of the receipt of the confirmation of the letter of credit. For example, "the goods must be delivered no later than X days after the date of the receipt of the confirmation of the letter of credit by the Seller."

You should check the shipment frequency with the shipping company or with your freight forwarder before negotiating the delivery date and allow for possible delays. Usually major shipping lines would have shipments to most destinations occurring weekly.

Additional Terms - The terms and conditions specified below are not necessary to enclose in a contract, but are very important to avoid uncertainties and minimise your risks.

Claims clause - Claims are common in International Trade. In fact, there are people who make a living out of claims and you have to be aware of that. By including a claim clause in the contract, you may be able to avoid costly litigation in the event of a dispute.

Arbitration Clause - Trade disputes and claims may be settled in different manners. It is better to settle a claim amicably by negotiations outside arbitration or a court. The ICC International Court of Arbitration recommends that all parties wishing to have recourse to ICC arbitration include the following standard clause in their contracts:

"All disputes arising out of or in connection with the present contract shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules in the International Court of Arbitration in Paris." Also you may add "The decision made by the Court of Arbitration is final and binding upon all Parties."

Force Majeure Clause - Force Majeure literally means "greater force". "Force Majeure" clauses excuse you or the buyer from performing the contract obligations if the failure is caused by conditions beyond your or the buyer's control. Example "Force Majeure" Clause is as under.

Neither Party shall be liable or responsible for any failure or delay in performance under the present Contract if such failure or delay is caused by Act of God, Government restrictions (including the denial or cancellation of any export or other necessary license), riots, civil commotions, wars, insurrections and/or any other cause beyond the reasonable control of the Party whose performance is affected.

Negotiations

Negotiating is an art. Your buyers will be pleased if they manage to negotiate any discounts from you. Don't disappoint them. Include at least 10% in your export prices for negotiating. By discounting the price you will be able to gain better trade terms. However, you have to be careful with allowances. If the price is too high to begin with you may not get the buyer to even commence negotiations.

A reasonable discount in price may be considered after determining the buyer's interest in the product, future prospects and continuity in business. Learn to recognise "genuine" inquiries and beware of "dream" orders.

As a rule, a "genuine" inquiry has a brief introduction, is fairly specific in what it is looking for and will have a company name, contact name and contact details. If you clearly understand that an inquiry you receive isn't worth an answer, just ignore it.

Confirmation of order

On receiving an export order, it should be examined carefully in respect of items, specification, payment conditions, packaging, delivery schedule, etc. and then the order should be confirmed. Accordingly, the exporter may enter into a formal contract with the overseas buyer.

8.12 Export Credit Insurance from ECGC

International trade involves payment risks due to buyer/country insolvency. These risks can be covered through ECGC Limited. The credit insurance enables you to expand your exports without fear of loss. You should try to insure payments under documentary collections, consignment and open account terms. You may even consider the insurance of the unconfirmed LC.

The export credit insurance, issued by ECGC in your favour, protects you against non-payments by the buyer or by the Issuing Bank (in case of insuring an unconfirmed LC) due to commercial (insolvency, fraud) or political risk. In case of non-payment, you will usually receive 80-90% of the invoice. The insured payment allows you to obtain export finance from a bank.

ECGC Limited (formerly Export Credit Guarantee Corporation of India Ltd) is a Government of India Enterprise which provides export credit insurance facilities to exporters and banks in India. It functions under the administrative control of Ministry of Commerce and Industry, and is managed by a Board of Directors comprising representatives of the Government, Reserve Bank of India, banking, insurance and exporting community. Over the years, it has evolved various export credit risk insurance products to suit the requirements of Indian exporters and commercial banks. ECGC is the seventh largest credit insurer of the world in terms of coverage of national exports.

ECGC is essentially an export promotion organization, seeking to improve the competitive capacity of Indian exporters by giving them credit insurance covers comparable to those available to their competitors from most other countries. It keeps it's premium rates at the lowest level possible.

How does ECGC help exporters?

- Offers insurance protection to exporters against payment risks
- Provides guidance in export-related activities
- Makes available information on different countries with it's own credit ratings
- Makes it easy to obtain export finance from banks/financial institutions
- Assists exporters in recovering bad debts
- Provides information on credit-worthiness of overseas buyers

Need for export credit insurance

Payments for exports are open to risks even at the best of times. The risks have assumed large proportions today due to the far-reaching political and economic changes that are sweeping the world. An outbreak of war or civil war may block or delay payment for goods exported. A coup or an insurrection may also bring about the same result. Economic difficulties or balance of payment problems may lead a country to impose restrictions on either import of certain goods or on transfer of payments for goods imported. In addition, the exporters have to face commercial risks of insolvency or protracted default of buyers. The commercial risks of a foreign buyer going bankrupt or losing his/her capacity to pay are aggravated due to the political and economic uncertainties. Export credit insurance is designed to protect exporters from the consequences of the payment risks, both political and commercial, and to enable them to expand their overseas business without fear of loss.

The risks covered under the Standard Policy

Following risks are covered under Standard Policy from the date of shipment :

(a) Commercial Risks

i. Risks covered on the overseas buyers:

- Insolvency of the buyer
- Failure of the buyer to make the payment due within a specified period, normally four months from the due date
- Buyer's failure to accept the goods, subject to certain conditions

ii. Risks covered on the LC opening Bank:

- Insolvency of the LC opening bank
- Failure of the LC opening bank to make the payment due within a specified period normally four months from the due date

(b) Political Risks

- Imposition of restriction by the Government of the buyer's country or any Government action, which may block or delay the transfer of payment made by the buyer
- War, civil war, revolution or civil disturbances in the buyer's country. New import restrictions or cancellation of a valid import license in the buyer's country
- Interruption or diversion of voyage outside India resulting in payment of additional freight or insurance charges which cannot be recovered from the buyer
- Any other cause of loss occurring outside India not normally insured by general insurers, and beyond the control of both the exporter and the buyer

Small Exporters Policy - (SEP)

The Small Exporter's Policy is basically the Standard Policy, incorporating certain improvements in terms of cover, in order to encourage small exporters to obtain and operate the policy. It is issued to exporters whose anticipated export turnover for the period of one year does not exceed Rs 5 crore. The Maximum Liability under the SEP shall be fixed as per laid down guidelines, but shall not exceed Rs 2 crore. The nature of commercial risks and political risks cover is similar to that of the Shipment Comprehensive Risk (SCR) or Standard policy.

Period of Policy: 12 months

Minimum premium: Premium payable will be determined on the basis of projected exports on an annual basis subject to a minimum premium of Rs 5000/- for the policy period and is non-refundable. No claim bonus in the premium rate is granted every year at the rate of 5%.

Shipments Comprehensive Risks Policy - (SCR)

An exporter whose annual export turnover is more than Rs 5 crore is eligible for this Policy. This is a Standard Whole Turnover Policy wherein all shipments are required to be covered under the Policy.

Period of Policy: 12 Months

Minimum Premium: Rs 10,000/- shall be adjusted towards premiums falling due on the shipments effected under the policy and is non-refundable.

How Comprehensive policy Works?

For example, you are an exporter, you obtained an order from XYZ - an overseas buyer to ship them goods for 6 months for USD 6000 (us dollars six thousand). The buyer instructed you to ship goods worth USD 1000 (one thousand) per shipment, each month. Means, you ship six times in each month for USD 1000 per shipment and total of USD 6000 for six months. As per the agreed terms by you and your buyer, credit period you have allowed is 60 days D.A.P (DA). Means, 60 days from the date of particular shipment, your buyer has to pay the amount of USD 1000 to you. Again in next month the buyer has to pay USD 1000 against the second shipment you have shipped to your buyer.

This process continues till the 6th shipment effect. You approaches ECGC and apply with your buyer's (xyz) complete details and their bank address. Based on the available data and market research, ECGC approves a credit limit of USD 2000 against the particular buyer – XYZ. This means, the total outstanding liability of existing buyer (XYZ) should not exceed the limit of USD 2000 at any point of time.

Important Obligations of the Exporter

- Obtaining valid credit limit approval on buyers and banks from ECGC.
- Premium is payable in advance as per IRDA regulations and sufficient premium deposit is also to be maintained in advance based on your turnover projection at all times during the policy.
- Submission of Monthly declaration of shipments by 15th of the subsequent month.
- Notifying/Declaration of payments for bills that have remained unpaid beyond 30 days from its due date of payment, by the 15th of the subsequent month.
- Filing of claim within 360 days from the due date of the export bill or 540 days from expiry date of the Policy Cover whichever is earlier.
- Initiating recovery steps including legal action.
- Sharing of recovery.

Highlights

- Higher percentage of cover
- Competitive premium rate.
- No Claim Bonus (NCB) of 5% subject to no claim, upto a maximum of 50%.
- Availability of Discretionary Limits on buyers on conditions.

8. 13 Export Finance

Finance is a life and blood of any business whether it is domestic or international. It is more important in case of export as there could be considerable lag in receiving the export order and final payment from the overseas buyer. To promote export, most countries have specific financial institutions to provide credit to their exporters. The export credit is broadly classified as pre shipment and post shipment finance.

Pre shipment Finance

Pre shipment finance, also called packing credit, is the working capital financed by commercial banks prior to the shipment of goods. This allows the exporter to meet various operational expenses incurred before the goods are ready for shipment.

Purpose

- Purchase raw materials and other inputs for manufacturing
- Import materials from domestic markets to produce goods for export
- Assemble goods
- Store goods at a suitable warehouse facility until shipment
- Pack and label goods
- Pay for documentation
- Pay for pre-shipment inspection charges

Basis of Finance

Pre shipment credit is only issued to that exporter who has the export order in his own name. However, as an exception, financial institution can also grant credit to a third party manufacturer or supplier of goods who does not have export orders in their own name. It is extended in the forms of Indian Rupee as well as in foreign currency.

Eligibility/Documents

- Exporter should have IEC No.
- Exporter should not be in the caution list of RBI.
- Confirmed export order or irrevocable LC or original cable / fax / telex message exchange between the exporter and the buyer revealing the information about the full name and address of the overseas buyer, description quantity and value of goods (FOB or CIF), destination port and the last date of payment.
- Formal application for release the packing credit with undertaking to the effect that the exporter would be ship the goods within stipulated due date and submit the relevant shipping documents to the banks within prescribed time limit.
- Licence issued by DGFT if the goods to be exported fall under the restricted or

canalized category. If the item falls under quota system, proper quota allotment proof needs to be submitted.

Quantum of Finance

The quantum of finance is fixed depending on the FOB value of contract/LC or the domestic values of goods, whichever is found to be lower. Normally insurance and freight charged are considered at a later stage, when the goods are ready to be shipped.

The only guideline principle is the concept of Need Based Finance. Banks determine the percentage of margin, depending on factors such as the nature of order, the nature of the commodity and capability of exporter to bring in the requisite contribution.

In this case disbursals are made only in stages and if possible not in cash. The payments are made directly to the supplier by drafts/bankers/cheques. The bank decides the duration of packing credit depending upon the time required by the exporter for processing of goods.

Duration

The maximum duration of packing credit period is 180 days, however bank may provide a further 90 days extension on its own discretion, without referring to RBI.

Post Shipment Finance

Post Shipment Finance is a kind of loan provided by a financial institution to an exporter or seller against a shipment that has already been made. It is meant to finance export sales receivable after the date of shipment of goods to the date of realization of exports proceeds. In cases of deemed exports, it is extended to finance receivable against supplies made to designated agencies. Exporters don't wait for the importer to deposit the funds.

Purpose

- Pay for distributors and agency services
- Conduct promotional activities in the overseas market
- Pay port authorities, customs and shipping agents
- Pay export tax and duty, freight and other expenses
- Pay ECGC and marine insurance premium
- Meet after-sales service expenses
- Pay for expenses in relation to exhibitions and trade fairs within the country

Basis of Finance

Post shipment finance is provided against evidence of shipment of goods or supplies made to the importer or seller or any other designated agency.

Types of Finance

Post shipment finance can be secured or unsecured. Since the finance is extended against evidence of export shipment and bank obtains the documents of title of goods, the finance is normally self liquidating. In that case it involves advance against undrawn balance, and is usually unsecured in nature. Further, the finance is mostly a funded advance. In few cases, such as financing of project exports, the issue of guarantee (retention money guarantees) is involved and the financing is not funded in nature.

Quantum of Finance

Post shipment finance can be extended up to 100% of the invoice value of goods. Banks can also finance undrawn balance. In such cases banks are free to stipulate margin requirements as per their usual lending norm.

Duration

Post shipment finance can be of short terms or long term, depending on the payment terms offered by the exporter to the overseas importer. In case of cash exports, the maximum period allowed for realization of exports proceeds is six months from the date of shipment. Concessive rate of interest is available for a highest period of 180 days, opening from the date of surrender of documents. Usually, the documents need to be submitted within 21days from the date of shipment.

8. 14 Procurement and Packing of Goods

Once you are ready with the infrastructure for exporting goods and have obtained necessary finance, you should proceed to procure the goods for export. Procuring the goods should be done with extreme care and caution as to the quality and cost. However, procuring the raw materials etc. and manufacturing the goods for export will need extra efforts on your part. If you are an established exporter, you can have the facility of procuring raw materials under the Duty Exemption Scheme.

An important stage after manufacturing of goods or their procurement is their preparation for shipment. This involves labeling, packaging, packing and marking of export consignments. Packing should be of international standards. Good packaging delivers and presents the goods in top condition and in attractive way. It helps easy handling, maximum loading, reducing shipping costs and to ensuring safety and standard of the cargo. Proper packaging and labelling not only makes the final product look attractive but also save a huge amount of money by saving the product from wrong handling the export process.

The export goods should be labeled, packaged and packed strictly as per the buyer's specific instructions.

Packaging

The primary role of packaging is to contain, protect and preserve a product as well as aid in its handling and final presentation. Packaging fulfils a vital role in helping to get the export products to the market in top condition, as well as in presenting your goods to the overseas buyer in an attractive way. While packaging, quality should not be compromised merely to cut down costs, packaging should also be in conformity with the instructions issued by the importer.

Packaging also refers to the process of design, evaluation, and production of packages. The packaging can be done within the export company or the job can be assigned to an outside packaging company.

Packaging provides following benefits to the goods to be exported:

- **Physical Protection –** Packaging provides protection against shock, vibration, temperature, moisture and dust.
- **Containment or agglomeration –** Packaging provides agglomeration of small objects into one package for reason of efficiency and cost factor. For example it is better to put 1000 pencils in one box rather than putting each pencil in separate 1000 boxes.
- **Marketing**: Proper and attractive packaging play an important role in encouraging a potential buyer.
- **Convenience** - Packages add convenience in distribution, handling, display, sale, opening, use, and reuse.
- **Security** - Packaging can play an important role in reducing the security risks of shipment. It also provides authentication seals to indicate that the package and contents are not counterfeit. Packages also can include anti-theft devices, such as dye-packs, RFID tags, or electronic article surveillance tags, that can be activated or detected by devices at exit points and require specialized tools to deactivate. Using packaging in this way is a means of loss prevention.

Packing

Packing refers to the external containers used for transportation. The shape of packing cases play a very important role in packing the cargo, and the nature of packing material to be used will depend upon the items exported As regard specification for the size, weight and strength care must be taken to ensure that the weight of standard case does not exceed 50 Kg. for easy handling of the cargo. Before packing and sealing the goods, it should be ensured that all the contents are properly placed in the case and the list of contents of packing notes should be prepared so that the buyer, the Customs authorities and the Insurance authorities can easily check the contents of each and every case.

The consolidated statement of contents for a number of cases is called the Packing List, which should be prepared in the prescribed standardised format.

Marking

Marking means to mark the address, number of packages etc. on the packets. It is essential for identification purpose and should provide information on exporters' mark, port of destination, place of destination, order number and date, gross, net and tare weight and handling instructions. It should also be ensured that while putting marks, the law of buyer's country is duly compiled with.

All shipping cases should be marked a number with special symbols selected by the exporters or the importers, so that the competitors cannot find out the details of the customers and the country of destination or supplier's country of despatch. Care should also be taken to ensure that the marking conforms to those written in the invoice, insurance certificate, bill of lading and other documents. The International Cargo Handling Co-ordination, Association has set out for the use of exporters a number of recommendations for the marking of goods carried by ocean-going vessels. They are equally useful for sending goods by other modes of transportation.

The marks should appear in certain order. Essential data should be placed in oblong frames with lines 1.5 cm thick and subsidiary information should be placed in another type of frame. Declaration on large packages should be placed on two continuous sides, and for consignments bound together on a pallet, also on the top. Handling instructions should be placed on all four sides. Similar packages, such as goods in sacks, should be marked on two opposite sides.

Labelling

Labelling requirements differ from country to country and the same should be ascertained well in advance from the buyer. The label should indicate quality, quantity, method of use etc. Special international care labels have been specified for the textile items by GINITEX, and the same should be scrupulously adhered to.

It is also important for an exporter to be familiar with all kinds of sign and symbols and should also maintain all the nationally and internationally standards while using these symbols. Labelling should be in English, and words indicating country of origin should be as large and as prominent as any other English wording on the package or label.

Labelling on product provides the following important information:

- Shipper's mark
- Country of origin
- Weight marking (in pounds and in kilograms)

- Number of packages and size of cases (in inches and centimeters)
- Handling marks (international pictorial symbols)
- Cautionary markings, such as “This Side Up.”
- Port of entry
- Labels for hazardous materials

Labelling of a product also provides information like how to use, transport, recycle, or dispose of the package or product. Only fast dyes should be used for labeling. Essential data should be in black and subsidiary data in a less conspicuous colour; red and orange and so on. For food packed in sacks, only harmless dyes should be employed, and the dye should not come through the packing in such a way as to affect the goods.

8. 15 Quality Control and Pre-shipment Inspection

An important aspect about the goods to be exported is compulsory quality control and pre-shipment inspection. Under the Export (Quality Control and Inspection) Act, 1963, about 1000 commodities under the major groups of Food and Agriculture, Fishery, Minerals, Organic and Inorganic Chemicals, Rubber Products, Refractoriness, Ceramic Products, Pesticides, Light Engineering, Steel Products, Jute Products, Coir and Coir Products, Footwear and Footwear Products / Components are subject to compulsory pre-shipment inspection.

ISI Certification

Indian Standards Institute now known as Bureau of Indian Standard (BIS) is a registered society under a Government of India. BIS main functions include the development of technical standards, product quality and management system certifications and consumer affairs.

AGMARK Certification

AGMARK is an acronym for Agricultural Marketing and is used to certify the food products for quality control. AGMARK has been dominated by other quality standards including the non manufacturing standard ISO 9000.

Products having ISI Certification mark or AGMARK are not required to be inspected by any agency. These products do not fall within the purview of the export inspection agencies network. The Customs Authorities allow export of such goods even if not accompanied by any pre-shipment inspection certificate, provided they are otherwise satisfied that the goods carry ISI Certification or the AGMARK.

Benefits of ISI and AGMARK Certification

Products having ISI Certification mark or AGMARK are not required to be inspected by any agency. These products do not fall within the purview of the export inspection agencies network. The Customs Authorities allow export of such goods even if not accompanied by any pre-shipment inspection certificate, provided they are otherwise satisfied that the goods carry ISI Certification or the AGMARK.

In-Process Quality Control (IPQC)

In-Process Quality Control (IPQC) inspection is mainly done for engineering products and is applied at the various stages of production. Units approved under IPQC system of in-process quality control may themselves issue the certificate of inspection, but only for the products for which they have been granted IPQC facilities. The final certificate of inspection on the end-products is then given without in-depth study at the shipment stage.

Self-Certification Scheme

Under the self-Certification Scheme, large exporters and manufacturers are allowed to inspect their product without involving any other party. The facility is available to manufacturers of engineering products, chemical and allied products and marine products. Self-Certification is given on the basis that the exporter himself is the best judge of the quality of his products and will not allow his reputation to be spoiled in the international market by compromising on quality. Self-Certification Scheme is granted to the exporter for the period of one year. Exporters with proven reputation can obtain the permission for self-certification by submitting an application to the Director (Inspection and Quality Control), Export Inspection Council of India, New Delhi.

ISO 9000

The discussion on inspection certificate and quality control is incomplete without ISO-9000. Established in 1987, ISO 9000 is a series of international standards that has been accepted worldwide as the norm assuring high quality of goods. The current version of ISO 9000 is ISO 9000:2000.

International Agencies

At times, foreign buyers lay down their own standards/ specifications which may or may not be in consonance with the Indian standards. They may also insist upon inspection by their own nominated agencies. These issues should be sorted out before confirmation of order.

8.16 Cargo Insurance

Export and import require transportation of goods over a long distance. No matter whichever transport has been used in international trade, necessary insurance is must for ever good. Cargo insurance also known as marine cargo insurance is a type of insurance against physical damage or loss of goods during transportation. Cargo insurance is effective in all the three cases whether the goods have been transported via sea, land or air.

Insurance policy is not applicable if the goods have been found to be packaged or transported by any wrong means or methods. So, it is advisable to use a broker for placing cargo risks.

Scope of Coverage

The following can be covered for the risk of loss or damage:

- Cargo import, export cross voyage dispatched by sea, river, road, rail post, personal courier, and including associated storage risks.
- Good in transit (inland).
- Freight service liability.
- Associated stock.

However there are still a number of general exclusion such loss by delay, war risk, improper packaging and insolvency of carrier. Converse for some of these may be negotiated with the insurance company. The Institute War Clauses may also be added.

Regular exporters may negotiate open cover. It is an umbrella marine insurance policy that is activated when eligible shipments are made. Individual insurance certificates are issued after the shipment is made. Some LC will require an individual insurance policy to be issued for the shipment, While others accept an insurance certificate.

Specialist Covers

Whereas standard marine/transport cover is the answer for general cargo, some classes of business will have special requirements. General insurer may have developed specialty teams to cater for the needs of this business, and it is worth asking if this cover can be extended to export risks. Cover may be automatically available for the needs of the trade viz., project constructional works insurers can cover the movement of goods for the project, fine art, precious stones etc. Special Cover can be extended to cover sending of precious stones. Stock through put cover extended beyond the time goods are in transit until when they are used at the destination.

Seller's Buyer's Contingent Interest Insurance

An exporter selling on, for example FOB delivery terms would according to the contract and to INCOTERMS, have not responsibility for insurance once the goods have passed the ship's rail. However, for peace of mind, he may wish to purchase extra cover, which will cover him for loss or will make up cover where the other policy is too restrictive. This is known as Seller's Interest Insurance.

Similarly, cover is available to importers/buyers. Seller's Interest and Buyer's Interest covers usually extended cover to apply if the title in the goods reverts to the insured party until the goods are recovered resold or returned.

Loss of Profits/ Consequential Loss Insurance

Importers buying goods for a particular event may be interested in consequential loss cover in case the goods are late and replacements have to be found to replace them. In such cases, the insurer will pay a claim and may receive proceeds from the eventual sale of the delayed goods.

8.17 Currency Risk Management

Currency risk is a type of risk in international trade that arises from the fluctuation in price of one currency against another. This is a permanent risk that will remain as long as currencies remain the medium of exchange for commercial transactions. Market fluctuations of relative currency values will continue to attract the attention of the exporter, the manufacturer, the investor, the banker, the speculator, and the policy maker alike.

While doing business in foreign currency, a contract is signed and the exporter company quotes a price for the goods using a reasonable exchange rate. However, economic events may upset even the best laid plans. Therefore, the company would ideally wish to have a strategy for dealing with exchange rate risk.

Currency Hedging

Currency hedging is technique used to avoid the risks associated with the changing value of currency while doing transactions in international trade. It is possible to take steps to hedge foreign currency risk. This may be done through one of the following options:

- Billing foreign deals in Indian Rupees: This insulates the Indian exporter from currency fluctuations. However, this may not be acceptable to the foreign buyer. Most of international trade transactions take place in one of the major foreign currencies USD, Euro, Pounds Sterling, and Yen.
- Forward contract. You agree to sell a fixed amount of foreign exchange (to convert this into your currency) at a future date, allowing for the risk that the buyer's payments are late.
- Options: You buy the right to have currency at an agreed rate within an agreed period. For example, if you expect to receive $35,000 in 3 months, time you could buy an option to convert $35,000 into your currency in 3 months. Options can be more expensive than a forward contract, but you don't need to compulsorily use your option.
- Foreign currency bank account and foreign currency borrowing: These may be suitable where you have cost in the foreign currency or in a currency whose exchange rate is related to that currency.

8.18 Delivering of Goods and Freight Forwarder

There are many combinations of people and methods that you can use to deliver the goods that were ordered. For this purpose you can use services provided by the freight forwarder.

Freight Forwarder

A freight forwarder is a person who takes care of the important steps of shipping the merchandise. This person quotes shipping rates, provides routing information, and books cargo space.

Freight forwarders prepare documentation, contract shipping insurance, route cargo with the lowest customs charges, and arrange storage. They are valuable to you as an import/export agent, and they are important in handling the steps from factory to final destination.

They can be found online or by personal referrals. Find someone who can do a good job for you. You'll need someone who you can work with, since this may become a long-term business relationship

Types of Export Containers

Different types of containers are used in domestic and international trade to move cargo from one location to another. Some types of containers are Standard Dry Containers, Open Top Containers, High cube Containers, Refrigerated Containers (Reefer Containers), GOH Containers (Garments on hanger containers), Open Side Containers, Tank Containers , Half height Containers, Ventilated Containers, Car Carrier Containers, Hard top Containers, Insulated Containers, Tunnel Containers, Platform Containers, Flat rack Containers etc. These containers are used to transport different types of goods as per convenience, coastwise and time saving parameters. For example, Standard dry containers are used to move general dry cargo, temperature sensitive cargo is moved with refrigerated containers, liquid and powder type goods are moved with tank container so on. So each type of container is manufactured as per customer's requirements.

Most of the shipping cargo container length would be 20' or 40' standard in sizes.

20' Dry Cargo Container

20' containers are commonly used by most of the traders apart from 40' containers. 20' standard dry cargo containers are manufactured with steel which is totally sealed and water proof with plywood flooring.

The dimensions	External	Internal
• Length	20' (6.96 m)	19' 4" (5.89 m)
• Width	8' (2.43 m)	7' 8.6" (2.35 m)
• Height	8' 6" (2.59 m)	7' 10" (2.38 m)

The recommended load volume = 1000 cft (28 cbm)

Cargo capacity = Standard : 17.8 Ton

Heavy duty : 27.0 Ton

Pay load weight: 22100 kg

40' shipping cargo dry container

The size and construction design of containers has been standardized; there can be unit variations within each size and type category and by container owner or operator. For example, two 40-foot dry cargo containers could look the same on the outside but might have different cargo handling capacity on the inside because one container was constructed for handling general cargo loaded onto pallets and the other container was constructed to handle garments on hangers so they can be easily off-loaded and placed immediately on the sales floor at your local clothing store.

The dimensions	External	Internal
• Length	40' (12.19 m)	39' 5" (12.02 m)
• Width	8' (2.43 m)	7' 8.6" (2.35 m)
• Height	8' 6" (2.59 m)	7' 10" (2.38 m)

The recommended load volume = 2050 cft (58 cbm)

Cargo capacity = Standard : 27.8 Ton

The information on measurement and weight mentioned may vary slightly from one brand owner to another. Some of the top cargo container owners are NYK, Evergreen, CMA-CGM, Maersk, MSC etc. You may reconfirm exact weight, measurement and other details from container owner or their agent.

Less Container Load (LCL) and Full Container Load (FCL)

If a shipper does not have enough goods to accommodate in a fully loaded container, he arrange with a consolidator to book his cargo. This type of shipment is called LCL shipment. The said consolidator arranges a full container (FCL) with a main shipping carrier, and consoles the shipments of other shippers. Means the freight forwarder who books a full container accepts goods from different shippers and consolidates all such goods in to one container as a Fully Loaded Container – FCL. The freight forwarder sorts out these goods at destination or at trans-shipment points, meant for different consignees at different ports.

Once after arrival of goods at destination the freight forwarder release goods meant for each consignee separately by collecting necessary charges if any.

Precautions to be taken while booking LCL

Transit Time of LCL cargo

Firstly, do not expect the cargo arrival time as faster as an FCL shipment. Because, since the cargo is a Less Container Load (LCL), the goods will be stuffed in to the container, once the freight forwarder receives enough cargo to make the container 'full' at place of receipt. Place of receipt may be near loading port or container freight station, away from loading port depends up on location of your factory where the goods to be exported are. Secondly, there may have one or more trans-shipment ports before arriving cargo at final destination. Chances are there for a delay of one or more days at trans-shipment point also. Before appointing a freight forwarder, you need to get a clear idea about the arrival of goods at destination.

Get quote in writing

If any haulage is involved, what would be the inland haulage charges? What is the ocean freight to the port of final destination etc. Since the cargo is a Less Container Load (LCL), Freight forwarders quote the charges per cubic meter basis (CBM basis). Learn, how CBM is calculated if weight is more.

Destination Service Charges – Beware of trap behind

This is a very important tip to be strictly followed by any exporter while booking LCL shipment with a freight forwarder. Get in writing from local freight forwarder about the 'amount of charges, their counterpart at destination collects from your buyer'. This is very important because, different freight forwarders charge different amount as 'Delivery order charges' from the consignee abnormally in the field of LCL shipments. Because, with the understanding between the freight forwarders each other at load port and final destination, the quote at load port may be low, but higher at final destination as 'delivery charges'.

Role of 'Service' in LCL shipments

In a supply chain management system, 'service' plays a major role. You may have a very good relationship with your local freight forwarder. However, the same service is expected to get from all his counterparts in transit as well as at final destination. The same service is required to be delivered to your overseas buyer at destination. So before finalizing freight forwarder, you can collect the local freight forwarders counterpart office address details at final destination. Let your buyer also satisfy with 'no objection in shipping through the said forwarder'.

Survey report to reconfirm volume of goods

If you do not know the exact volume of LCL shipment which you have shipped, you can demand a copy of survey report issued by the surveyor in CFS. This survey report can be obtained from your shipping carrier. The said volume can be cross checked with consolidator's invoice while paying amount to them.

8.19 Custom Clearance

In India custom clearance is a complex and time taking procedure that every exporter faces in his export business. Physical control is still the basis of custom clearance in India where each consignment is manually examined in order to impose various types of export duties. High import tariffs and multiplicity of exemptions and export promotion schemes also contribute in complicating the documentation and procedures. So, a proper knowledge of the custom rules and regulation becomes important for the exporter.

Exporters may avail services of Customs House Agents (CHA) licensed by the Commissioner of Customs. They are professionals and facilitate work connected with clearance of cargo from Customs. For clearance of export goods, the exporter or export agent has to undertake the following formalities:

Registration

Any exporter who wants to export his good need to obtain PAN based Business Identification Number (BIN) from the Directorate General of Foreign Trade prior to filing of shipping bill for clearance of export goods. The exporters must also register themselves to the authorised foreign exchange dealer code and open a current account in the designated bank for credit of any drawback incentive.

All the exporters intending to export under the export promotion scheme need to get their licences etc.

Processing of Shipping Bill – Non-EDI

In case of Non-EDI, the shipping bills or bills of export are required to be filled in the format as prescribed in the Shipping Bill and Bill of Export (Form) regulations, 1991. An exporter need to apply different forms of shipping bill/ bill of export for export of duty free goods, export of dutiable goods and export under drawback etc.

Processing of Shipping Bill – EDI

Under EDI System, declarations in prescribed format are to be filed through the Service Centers of Customs. A checklist is generated for verification of data by the exporter/CHA. After verification, the data is submitted to the System by the Service Center operator and the System generates a Shipping Bill Number, which is endorsed on the printed checklist and returned to the exporter/CHA. For export items which are subject to export cess, the TR-6 challans for cess is printed and given by the Service Center to the exporter/CHA immediately after submission of shipping bill. The cess can be paid on the strength of the challan at the designated bank. No copy of shipping bill is made available to exporter/CHA at this stage.

Quota Allocation

The quota allocation label is required to be pasted on the export invoice. The allocation number of AEPC (Apparel Export Promotion Council) is to be entered in the system at the time of shipping bill entry. The quota certification of export invoice needs to be submitted to Customs along-with other original documents at the time of examination of the export cargo. For determining the validity date of the quota, the relevant date needs to be the date on which the full consignment is presented to the Customs for examination and duly recorded in the Computer System.

Arrival of Goods at Docks

On the basis of examination and inspection goods are allowed enter into the Dock. At this stage the port authorities check the quantity of the goods with the documents.

System Appraisal of Shipping Bills

In most of the cases, a Shipping Bill is processed by the system on the basis of declarations made by the exporters without any human intervention. Sometimes the Shipping Bill is also processed on screen by the Customs Officer.

Customs Examination of Export Cargo

Customs Officer may verify the quantity of the goods actually received and enter into the system and thereafter mark the Electronic Shipping Bill and also hand over all original documents to the Dock Appraiser of the Dock who many assign a Customs Officer for the examination and intimate the officers' name and the packages to be examined, if any, on the check list and return it to the exporter or his agent.

The Customs Officer may inspect/examine the shipment along with the Dock Appraiser. The Customs Officer enters the examination report in the system. He then marks the Electronic Bill along with all original documents and check list to the Dock Appraiser. If the Dock Appraiser is satisfied that the particulars entered in the system conform to the description given in the original documents and as seen in the physical examination, he may proceed to allow "**let export**" for the shipment and inform the exporter or his agent.

Stuffing / Loading of Goods in Containers

The exporter or export agent hand over the exporter's copy of the shipping bill signed by the Appraiser "Let Export" to the steamer agent. The agent then approaches the proper officer for allowing the shipment. The Customs Preventive Officer supervising the loading of container and general cargo in to the vessel may give "Shipped on Board" approval on the exporter's copy of the shipping bill.

Drawal of Samples

Where the Appraiser Dock (export) orders for samples to be drawn and tested, the Customs Officer may proceed to draw two samples from the consignment and enter the particulars thereof along with details of the testing agency in the ICES/E system.

There is no separate register for recording dates of samples drawn. Three copies of the test memo are prepared by the Customs Officer and are signed by the Customs Officer and Appraising Officer on behalf of Customs and the exporter or his agent.

The Assistant Commissioner/Deputy Commissioner if he considers necessary, may also order for sample to be drawn for purpose other than testing such as visual inspection and verification of description, market value inquiry, etc.

Amendments

Any correction/amendments in the check list generated after filing of declaration can be made at the Service Center, if the documents have not yet been submitted in the system and the shipping bill number has not been generated. In situations, where corrections are required to be made after the generation of the shipping bill number or after the goods have been brought into the Export Dock, amendments is carried out in the following manners.

- The goods have not yet been allowed "let export" amendments may be permitted by the Assistant Commissioner (Exports).
- Where the «Let Export» order has already been given, amendments may be permitted only by the Additional/Joint Commissioner, Custom House, in charge of export section.

In both the cases, after the permission for amendments has been granted, the Assistant Commissioner / Deputy Commissioner (Export) may approve the amendments on the system on behalf of the Additional /Joint Commissioner. Where the print out of the Shipping Bill has already been generated, the exporter may first surrender all copies of the shipping bill to the Dock Appraiser for cancellation before amendment is approved on the system.

Export of Goods under Claim for Drawback

After actual export of the goods, the Drawback claim is processed through EDI system by the officers of Drawback Branch on first come first served basis without feeling any separate form.

Generation of Shipping Bills

The Shipping Bill is generated by the system in two copies- one as Custom copy and one as exporter copy. Both the copies are then signed by the Custom officer and the Custom House Agent.

8. 20 Documentation and Realization of Export Proceeds

International market involves various types of trade documents that need to be produced while making transactions. Each trade document is differ from other and present the various aspects of the trade like description, quality, number, transportation medium, indemnity, inspection and so on. So, it becomes important for the importers and exporters to make sure that their documents support the guidelines as per international trade transactions. A small mistake could prove costly for any of the parties. For example, a trade document about the bill of lading is a proof that goods have been shipped on board, while Inspection Certificate certifies that the goods have been inspected and meet quality standards. So, depending on these necessary documents, a seller can assure a buyer that he has fulfilled his responsibility whilst the buyer is assured of his request being carried out by the seller.

The three mandatory documents for export include Bill of Lading/Airway Bill, Commercial invoice cum packing list and Shipping Bill (Bill of Export). Other documents often used in international trade are Certificate of Origin, Combined Transport Document, Draft (or Bill of Exchange), Insurance Policy/Certificate, Inspection Certificate etc.

Air Waybill

Air Waybill make sure that goods have been received for shipment by air. A typical air waybill sample consists of three originals and nine copies. The first original is for the carrier and is signed by the export agent; the second original, the consignee's copy, is signed by the export agent; the third original is signed by the carrier and is handed to the export agent as a receipt for the goods.

Air Waybill serves as:

- Proof of receipt of the goods for shipment
- An invoice for the freight
- A certificate of insurance
- A guide to airline staff for the handling, dispatch and delivery of the consignment

The major requirements for an Air Waybill :

- The proper shipper and consignee must be mention.
- The airport of departure and destination must be mention.
- The goods description must be consistent with that shown on other documents.
- Any weight, measure or shipping marks must agree with those shown on other documents.
- It must be signed and dated by the actual carrier or by the named agent of a named carrier.
- It must mention whether freight has been paid or will be paid at the destination point.

Bill of Lading (B/L)

Bill of Lading is a document given by the shipping agency for the goods shipped for transportation form one destination to another and is signed by the representatives of the carrying vessel.

Bill of landing is issued in the set of two, three or more. The number in the set will be indicated on each bill of lading and all must be accounted for. This is done due to the safety reasons which ensure that the document never comes into the hands of an unauthorised person. Only one original is sufficient to take possession of goods at port of discharge so, a bank which finances a trade transaction will need to control the complete set. The bill of lading must be signed by the shipping company or its agent, and must show how many signed originals were issued. The bill of lading also forms the contract of carriage.

It will indicate whether cost of freight/carriage has been paid or not i.e., **Freight Prepaid**: paid by shipper or **Freight collect**: to be paid by the buyer at the port of discharge.

To be acceptable to the buyer, the B/L should:

- Carry an "On Board" notation to showing the actual date of shipment, (Sometimes however, the "on board" wording is in small print at the bottom of the B/L, in which cases there is no need for a dated "on board" notation to be shown separately with date and signature.)
- Be "clean" having no notation by the shipping company to the effect that goods/ packaging are damaged.

The main parties involve in a B/L:

- Shipper - The person who send the goods.
- Consignee - The person who take delivery of the goods.
- Notify Party - The person, usually the importer, to whom the shipping company or its agent gives notice of arrival of the goods.
- Carrier - The person or company who has concluded a contract with the shipper for conveyance of goods

  The bill of lading must meet all the requirements of the credit as well as complying with UCP 600. These are as follows:

- The correct shipper, consignee and notifying party must be shown.
- The carrying vessel and ports of the loading and discharge must be stated.
- The place of receipt and place of delivery must be stated, if different from port of loading or port of discharge.
- The goods description must be consistent with that shown on other documents.

- Any weight or measures must agree with those shown on other documents.
- Shipping marks and numbers and /or container number must agree with those shown on other documents.
- It must state whether freight has been paid or is payable at destination.
- It must be dated on or before the latest date for shipment specified in the credit.
- It must state the actual name of the carrier or be signed as agent for a named carrier.

Certificate of Origin

The Certificate of Origin is required by the custom authority of the importing country for the purpose of imposing import duty. It is usually issued by the Chamber of Commerce and contains information like seal of the chamber, details of the good to be transported and so on. The certificate must provide that the information required by the credit and be consistent with all other document.

Certificate of Origin would normally include:

- The name of the company and address as exporter.
- The name of the importer.
- Package numbers, shipping marks and description of goods to agree with that on other documents.
- Any weight or measurements must agree with those shown on other documents.
- It should be signed and stamped by the Chamber of Commerce.

Combined Transport Document

Combined Transport Document is also known as Multimodal Transport Document, and is used when goods are transported using more than one mode of transportation. In the case of multimodal transport document, the contract of carriage is meant for a combined transport from the place of shipping to the place of delivery. It also evidence receipt of goods but it does not evidence on board shipment, if it complies with ICC 600. The liability of the combined transport operator starts from the place of shipment and ends at the place of delivery. This documents need to be signed with appropriate number of originals in the full set and proper evidence which indicates that transport charges have been paid or will be paid at destination port.

Multimodal transport document would normally shows:

- That the consignee and notify parties are as the credit.
- The place goods are received, or taken in charges, and place of final destination.
- Whether freight is prepaid or to be collected.
- The date of dispatch or taking in charge, and the “On Board” notation, if any must

be dated and signed.

- Total number of originals.
- Signature of the carrier, multimodal transport operator or their agents.

Commercial Invoice

Commercial Invoice document is provided by the seller to the buyer. Also known as export invoice or import invoice, commercial invoice is finally used by the custom authorities of the importer's country to evaluate the good for the purpose of taxation.

The invoice must:

- Be issued by the beneficiary named in the credit (the seller).
- Be address to the applicant of the credit (the buyer).
- Be signed by the beneficiary (if required).
- Include the description of the goods exactly as detailed in the credit.
- Be issued in the stated number of originals (which must be marked "Original) and copies.
- Include the price and unit prices if appropriate.
- State the price amount payable which must not exceed that stated in the credit
- include the shipping terms.

Consular invoice

A consular invoices is a document that is required by some countries like Kenya, Tanzania, Mauritus, New Zealand, Australia, Iraq, Fiji, Nizeria, Myanmar etc.

Packing List

Also known as packing specification, it contain details about the packing materials used in the shipping of goods. It also include details like measurement and weight of goods. The packing List must have a description of the goods consistent with the other documents. It must have details of shipping marks and numbers consistent with other documents

Bill of Exchange

A Bill of Exchange is a special type of written document under which an exporter ask importer a certain amount of money in future and the importer also agrees to pay the importer that amount of money on or before the future date. This document has special importance in wholesale trade where large amount of money involved.

Persons involved in a Bill of Exchange:

- **Drawer:** The person who writes or prepares the bill.

- **Drawee**: The person who pays the bill.
- **Payee**: The person to whom the payment is to be made.
- **Holder of the Bill**: The person who is in possession of the bill.

Types of Bill of Exchange

On the basis of the due date there are two types of Bill of Exchange:

- **Bill of Exchange after Date**: In this case the due date is counted from the date of drawing.
- **Bill of Exchange after Sight**: In this case the due date is counted from the date of acceptance of the bill.

Insurance Certificate

Also known as Insurance Policy, it certifies that goods transported have been insured under an open policy and is not actionable with little details about the risk covered. It is necessary that the date on which the insurance becomes effective is same or earlier than the date of issuance of the transport documents.

Also, if submitted under a LC, the insured amount must be in the same currency as the credit and usually for the bill amount plus 10 per cent.

The requirements for completion of an insurance policy are as follow:

- The name of the party in the favour which the documents has been issued.
- The name of the vessel or flight details.
- The place from where insurance is to commerce typically the sellers warehouse or the port of loading and the place where insurance cases usually the buyer's warehouse or the port of destination.
- Insurance value that specified in the credit.
- Marks and numbers to agree with those on other documents.
- The description of the goods, which must be consistent with that in the credit and on the invoice.
- The name and address of the claims settling agent together with the place where claims are payable.
- Countersigned where necessary.
- Date of issue to be no later than the date of transport documents unless cover is shown to be effective prior to that date.

Inspection Certificate

Certificate of Inspection is a document prepared on the request of seller when he wants the consignment to be checked by a third party at the port of shipment before the goods are sealed for final transportation. In this process seller submit a valid Inspection Certificate along with the other trade documents like invoice, packing list, shipping bill, bill of lading etc to the bank for negotiation. On demand, inspection can be done by various world renowned inspection agencies on nominal charges.

Realization of Export Proceeds

After shipment, it is obligatory to present the documents to the Bank within 21 days for onward dispatch to the foreign Bank for arranging payment. Documents should be drawn under Collection/ Purchase/ Negotiation under LC as the case may be, along with the following documents:

- Bill of Exchange
- Letter of Credit (if shipment is under LC)
- Invoice and Packing List
- Bill of Lading / Airway Bill
- Shipping Bill / Bill of Export
- Declaration under Foreign Exchange
- Certificate of Origin/ GSP
- Inspection Certificate, wherever necessary
- Any other document as required by buyer

On receiving the documentary Bill of Exchange, the importer releases payment in case of sight draft or accepts the usance undertaking to pay on maturity of the Bill of Exchange. The exporter's bank receives the payment through importer's bank and is credited to exporter's accounts.

- As per FTP 2015-2020, all export contracts and invoices shall be denominated either in freely convertible currency of Indian rupees, but export proceeds should be realized in freely convertible currency except for export to Iran.
- Export proceeds should be realized in 9 months.
- Contact DGFT office for getting benefits of exports such as MEIS and others.

References

Agricultural and Processed Food Products Export Development Authority, http://apeda.gov.in

Agriculture and Cooperation Department, GoG, http://agri.gujarat.gov.in

Central Board of Excise and Custom, www.cbec.gov.in

Department of Agriculture, Co-operation & Farmers Welfare, GoI, http://agricorp.nic.in

Department of Commerce, GoI, http://commerce.nic.in

Directorare General of Commercial Intelligence and Statistics (DGCIS), www.dgciskol.nic.in

Directorate General of Foreign Trade, http://dgft.gov.in

E-Com Portal of Central Board of Excise and Custom, www.icegate.gov.in

Export Credit Guarantee Corporation of Inida Ltd. (ECGC Ltd.), www.ecgc.in

Federation of Indian Export Organisations (FIEO), www.fieo.org

Indian Trade Portal managed by FIEO, www.indiantradeportal.in

International Trade Centre, www.trademap.org

National Horticulture Board, http://nhb.gov.in

World Trade Organization, www.wto.org

APPENDIX-I

ITC (HS) Code of fruits and vegetables

FRUITS & VEGETABLES SEEDS	
12091000	Sugar Beet Seed, For Sowing
12092100	Lucerne (Alfalfa) Seed, For Sowing
12092200	Clover (Trifolium Spp) Seed, For Sowing
12092300	Fescue Seed Of Forage Plants
12092400	Kentucky Blue Grass (Poa Pratensis L) Seed, For Sowing
12092500	Rye Grass Seed Of Forage Plants
12092910	Australian Lupin Seeds
12092990	Other Seed Of Forage Plants
12093000	Seeds Of Herbaceous Plants Cultivated Principally For Their Flowers
12099110	Cabbage Seeds
12099120	Cauliflower Seeds
12099130	Onion Seeds
12099140	Pea Seeds
12099150	Radish Seeds
12099160	Tomato Seeds
12099190	Other Vegetable Seeds
12099910	Fruit Seeds For Planting Or Sowing
12099990	Other Fruit Seeds
FRESH VEGETABLES	
07031010	Onions, Fresh/Chilled
07011000	Potato Seeds, Fresh/Chilled
07019000	Potatoes Other Than Seed, Fresh/Chilled
07020000	Tomatoes, Fresh/Chilled
07031020	Shallots, Fresh/Chilled
07032000	Garlics, Fresh/Chilled
07039000	Leeks & Other Alliaceous Vegetables, Fresh/Chilled
07041000	Cauliflowers & Headed Broccoli, Fresh/Chilled
07042000	Brussels Sprouts, Fresh/Chilled
07049000	Kohrbi,Kale&Smlr Edbl Brassicas,Frsh/Chld
07051100	Cabbage Lettuce (Head Lettuce), Fresh/Chilled
07051900	Other Lettuce, Fresh/Chilled
07052100	Witloof Chicory (Cichorium Intybus Var. Foliosum), Fresh/Chilled
07052900	Other Chicory Frsh Or Chld
07061000	Carrots & Turnips, Fresh/Chilled
07069010	Horse Radish, Fresh/Chilled

07069020	Other Radish, Fresh/Chilled
07069030	Salad Beetroot Fresh Or Chilled
07069090	Other Roots Fresh Or Chilled
07070000	Cucumbers & Gherkins, Fresh/Chilled
07081000	Peas (Pisum Sativum), Shelled/Unshelled, Fresh/Chilled
07082000	Beans (Vigna Spp., Phaseolus Spp.), Shelled/Unshelled, Fresh/Chilled
07089000	Other Leguminous Vegetables Shelled/Unshelled, Fresh/Chilled
07092000	Asparagus, Fresh/Chilled
07093000	Aubergines (Egg-Plants), Fresh/Chilled
07094000	Celery Other Than Celeraic Fresh/Chilled
07095100	Mushrooms Of The Genus Agaricus, Fresh/Chilled
07095900	Other Truffles Fresh Or Chilled
07096010	Green Chilly Fresh/Chilled
07096090	Other Fruits Of The Genus Capsicum Or Pimenta
07097000	Spinach Fresh/Chilled
07099100	Globe Artichokes, Fresh/Chilled
07099200	Olives Fresh/Chilled
07099300	Pumpkins, Squash And Gourds (Cucurbita Spp.)
07099910	Green Pepper
07099920	Mixed Vegetables
07099990	Other Vegetables Fresh Or Chilled
07101000	Potatoes, Uncooked/Cooked By Steaming/Boiling In Water, Frozen
07102100	Peas (Pisum Sativum), Shelled/Unshelled, Frozen
07102200	Beans (Vigna Spp., Phaseolus Spp.), Shelled/Unshelled,Frozen
07102900	Other Leguminous Vegetables Shelled/Unshelled, Not Frozen
07103000	Spinach, New Zealand Spinach & Orache Spinach , Frozen
07104000	Sweet Corn, Frozen
07108010	Terragon
07108090	Other Vegtables , Frozen
07109000	Mixture Of Vegetables Frozen
07141000	Manioc (Cassava)
07142000	Sweet Potatoes
07149010	Sago Pith
07149090	Other Edible Roots And Tubers With High Starch
08031010	Plantain (Curry Banana) Fresh/Chilled
FRESH FRUITS	
08022100	Hazelnuts/Filberts (Corylus Spp.), In Shell
08022200	Hazelnuts/Filberts (Corylus Spp.), Shelled
08023100	Walnuts, In Shell
08023200	Walnuts, Shelled
08045020	Mangoes , Fresh/Dried,

08061000	Grapes, Fresh
08062010	Raisins (Grapes Dried)
08062090	Grapes Others
08028010	Areca Nuts Whole
08028020	Areca Nuts Split
08028030	Areca Nuts Ground
08028090	Other Areca Nuts
08029000	Other Betel Nuts
08031090	Other Plantain
08039010	Bananas, Fresh
08039090	Other Bananas, Excl. Plantains
08041010	Dates, Fresh/Dried (Excluding Wet Dates)
08041020	Dates Soft (Khayzur Or Wet Dates)
08041030	Dates Hard (Chhohara Or Kharek)
08041090	Other Dates
08042010	Figs, Fresh/Dried
08042090	Other Figs Excldng Frsh
08043000	Pineapples Fresh Or Dried
08044000	Avocados, Fresh/Dried
08045010	Guavas Fresh/Dried
08045030	Mangoes, Sliced Dried
08045090	Other Mangosteen Fresh / Dried
08051000	Oranges, Fresh/Dried
08052000	Mandarins, Including Tangerines & Satsumas; Simlar Citrus Hybrids
08054000	Grapefruit Including Pomelos, Fresh/Dried
08055000	Lemons (Citrus Limon/Limonum) & Limes (Citrus) Fresh / Dried
08059000	Other Citrus Fruit Fresh/Dried
08071100	Watermelons, Fresh
08071900	Other Melons Fresh
08072000	Papaws (Papayas), Fresh/Dried
08081000	Apples, Fresh
08083000	Pears, Fresh
08084000	Quinces, Fresh
08091000	Apricots, Fresh
08092100	Sour Cherries (Prunus Cerasus)
08092900	Other Cherries
08093000	Peaches, Including Nectarines, Fresh
08094000	Plums & Sloes, Fresh
08101000	Strawberries, Fresh
08102000	Raspberries, Blackberries, Mulberries & Loganberries, Fresh
08103000	Black/White/Red Currants & Gooseberries, Fresh

08104000	Cranberries, Bilberries & Other Fruits Of The Genus Vaccinium, Fresh
08105000	Kiwi Fruits Fresh / Dried
08106000	Durians Fresh / Dried
08107000	Persimmons
08109010	Pomegranates Fresh
08109020	Tamarind, Fresh
08109030	Sapota (Chico) Fresh
08109040	Custurd Apple (Ata)
08109050	Bore
08109060	Litchi
08109090	Other Fresh Fruits
PROCESSED FRUITS & VEGETABLES	
07114000	Cucumbers & Gherkins, Provisionally Preserved
20011000	Cucumbers & Gherkins, Prepared/Preserved By Vinegar/Acetic Acid
07112000	Olives, Provisionally Preserved
07115100	Mushrooms Of The Gensus Agaricus, Provisionally Preserved
07115900	Other Mushrooms & Truffles Provisionally Preserved
07119010	Green Pepper In Brine
07119020	Assorted Canned Vegetables
07119090	Other Vegetables Provisionally Preserved
07122000	Onions, Dried, Whole/Cut/Sliced/Broken/In Powder But NoT Prepared
07123100	Mushrooms Of The Genus Agaricus, Dried But Not Further Prepared
07123200	Wood Ears (Agricularia Spp.),Dried
07123300	Jelly Fungi (Tremella Spp.)
07123900	Others (E.G.Truffles Etc.)Dried.
07129010	Asparagus, Dried
07129020	Dehydrated Garlic Powder
07129030	Dehydrated Garlic Flakes
07129040	Garlic, Dried
07129050	Marjoram Oregano, Dried
07129060	Potatoes, Dried
07129090	Other Dehydrated Vegetables, Dried
08045040	Mango Pulp
08111010	Strawberries, Uncooked/Cooked By Steaming/Boiling In Water, Frozen, Containing Added Sugar Or Other Sweetening Matter
08111020	Strawberries, Uncooked/Cooked By Steaming/Boiling In Water, Frozen, Not Containing Added Sugar Or Other Sweetening Matter
08111090	Other Strawberries Whether Or Not Cooked Or Uncooked, Frozen
08112010	Raspberries, Blackberries, Mulberries & Loganberries, Black, White Or Red Currants And Gooseberries Containg Added Sugar

08112020	Raspberries, Blackberries, Mulberries & Loganberries, Black, White Or Red Currants And Gooseberries Not Containing Added Sugar
08112090	Other Raspberries, Blackberries, Mulberries & Loganberries, Black, White Or Red Currants And Gooseberries Cooked / Uncooked
08119010	Othr Fruts And Nuts W/N Cokd,Frzn Cntng Sugr
08119090	Othr Fruits Andnuts W/N Cokd,Frzn Not Contng Sugr
08121000	Cherries Provsnly Prsvd
08129010	Mango Slices In Brine
08129090	Other Fruits And Nuts Provsnly Presrvd
08131000	Apricots, Dried
08132000	Prunes, Dried
08133000	Apples, Dried
08134010	Tamarind, Dried
08134020	Singoda Whole (Water Nuts)
08134090	Others Fruit Dried (Excldng Tamarind And Singoda Whole)
08135010	Mixtures Of Nuts
08135020	Mixtures Of Dried Fruits
08140000	Peel Of Citrus Fruit/Melons, Including Watermelons, Fresh/Frozen/Dried/ Provisionally Preserved In Brine, In Sulpher Water Or In Other Preservative Solutions
20019000	Other Edible Parts Of Plants Prepared Or Preserved By Vinegar/Acetic Acid
20021000	Tomatoes Whole Or In Pieces
20029000	Tomatoes, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Whole/In Pieces
20031000	Mushrooms Of The Genus Agaricus, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid
20039010	Truffles,Prepared/Preserved Otherwisee Than By Vinegar/Acetic Acid
20039090	Other Mushrooms Or Truffles Prepd./ Presvd.
20041000	Potatoes, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Frozen, Other Than Products Of Heading 2006
20049000	Other Vegetables & Mixtures Of Vegetables, Prepared/Preserved Otherwise Than By Vinegar/Acid
20051000	Homogenised Vegetables, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006
20052000	Potatoes, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006
20054000	Peas (Pisum Sativum), Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006
20055100	Beans (Vigna Spp., Phaseolus Spp.), Shelled, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006
20055900	Others Beans (Excl. Vigna Spp., Phaseolus Spp.), Shelled, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006

20056000	Asparagus, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006
20057000	Olives, Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen, Other Than Products Of Heading 2006
20058000	Sweet Corn (Zea Mays Var. Saccharata), Prepared/Preserved Otherwise Than By Vinegar/Acetic Acid, Not Frozen
20059100	Bamboo Shoots
20059900	Other Veg & Mixtre Of Vegetbles
20060000	Vegetables, Fruit, Nuts, Fruit-Peel & Other Parts Of Plants, Preserved By Sugar (Drained, Glace Of Crystallised)
20071000	Homogenised Preparations (Jams, Fruits Jellies, Marmalades, Fruits Or Nut Puree And Fruit Or Nut Pastes, Obtained By Cooking, Whether Or Not Containing Added Sugar Or Other Sweetening Matter
20079100	Jams Jellies Mrmlds Etc Of Citrus Fruits
20079910	Jams Jellies Mrmlds Etc. Of Mangoes
20079920	Jams Jellies Mrmlds Etc. Of Guava
20079930	Jams Jellies Mrmlds Etc. Of Pineapple
20079940	Jams Jellies Mrmlds Etc. Of Apple
20079990	Jams Jellies Mrmlds Etc Of Other Fruits
20081100	Ground-Nuts, Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit Not Elsewhere Specified
20081910	Cashew Nuts Roasted, Salted Or Roasted And Salted (Including Mixtures) (Excluding Ground-Nuts), Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified
20081920	Other Roasted Nuts And Seeds Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified Or Included
20081930	Other Nuts And, Otherwise Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified Or Included
20081940	Other Roasted And Fried Vegetable Products
20081990	Other Roasted Nuts & Seed N.E.S.
20082000	Pineapples , Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified Or Included
20083010	Oranges , Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified Or Included
20083090	Other Fruits, Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified Or Included
20084000	Pears Prpd/Prsvd
20085000	Apricots Prpd/Prsvd
20086000	Cherries Prpd/Prsvd
20087000	Peaches Prpd/Prsvd

20088000	Strawberries, Prepared/Preserved, Whether Or Not Containing Added Sugar Other Sweetening Matter Or Spirit, Not Elsewhere Specified
20089100	Palm Hearts Prpd/Prsvd
20089300	Cranberries (Vaccinium Macrocarpon,Vaccinium Oxycoccos Vaccinium Vitis-Idaea)
20089700	Mixtures Of Citrus Fruits, Cranberries, Pears, Apricot Etc
20089911	Mango Squash
20089912	Lemon Squash
20089913	Orange Squash
20089914	Pineapple Squash
20089919	Other Fruits Squash
20089991	Fruit Cocktail Squash Prpd/Prsvd
20089992	Grapes Squash Prpd/Prsvd
20089993	Apples Squash Prpd/Prsvd
20089994	Guava Squash Prpd/Prsvd
20089999	Other Fruits Squash Prpd/Prsvd
20091100	Orange Juice, Frozen
20091200	Orange Juice Not Frozen, Of A Brix Value Not Exceeding 20,
20091900	Other Orange Juice, Not Frozen / Excluding Frozen
20092100	Grapefruit Juice, Of A Brix Value Not Exceeding 20
20092900	Other Grapefruit Juice
20093100	Other Single Citrus Fruit Juice Value Not Exc.20
20093900	Other Single Citrus Fruit Juice Value Exceeding 20
20094100	Pineapple Juice, Of A Brix Value Not Exceeding 20
20094900	Other Pineaple Juice Of A Brix Value Exceeding 20
20095000	Tomato Juice
20096100	Grape Juice, Including Must, Of A Brix Value Not Exceeding 30,
20096900	Other Juice(Incl.Must) Value>30
20097100	Apple Juice Of Brix Val.Not Exc.20
20097900	Other Apple Juice Of Brix Value Exceeding 20
20098100	Cranberry (Vaccinium Macrocarpon, Vaccinium Oxycoccos Vaccinium Vitis-Idaea) Juice
20098910	Mango Juice
20098990	Other Fruit Juice
20099000	Mixtrs Of Juices Unfrmntd Nt Contng Spirit

APPENDIX-II

List of important institutions related to agricultural export

1. Agricultural and Processed Food Products Export Development Authority (APEDA), http//apeda.gov.in
2. Bureau of Indian Standards (BIS), www.bis.org.in
3. Central Board of Excises and Customs (CBEC), www.cbec.gov.in
4. Confederation of indian Industry (CII), www.cii.in
5. Directorare General of Commercial Intelligence and Statistics (DGCIS), www.dgciskol.nic.in
6. Directorate General of Foreign Trade (DGFT), http://dgft.gov.in
7. Directorate of Marketing and Inspection (DMI), Ministry of Agriculture and Farmers Welfare, GoI, www.agmarknet.gov.in
8. Export Credit Guarantee Corporation of Inida Ltd. (ECGC Ltd.), www.ecgc.in
9. Export Impoart Bank of India (EXIM Bank) www.eximbankindia.in
10. Export Inspection Council (EIC), GoI, www.eicindia.gov.in
11. Federation of Indian Export Organisations (FIEO), www.fieo.org
12. FOREX, www.forex.com
13. Indian Council of Arbitration (ICA), www.icaindia.co.in
14. Indian Institute of Foreign Trade (IIFT), tedu.iift.ac.in
15. Indian Institution of Packaging (IIP), www.iip-in.com
16. India Investment Centre (IIC), www.tradechakra.com
17. India Trade Promotion Organisation (ITPO), indiatradefair.com
18. International Trade Centre (ITC), www.trademap.org
19. Marine Products Export Development Authority (MPEDA), www.mpeda.gov.in
20. Ministry of Commerce and Industry, GoI, http://commerce.nic.in
21. National Horticulture Board, http://nhb.gov.in
22. Spices Board India, www.indianspices.com
23. Tobacco Board, http://tobaccoboard.com
24. World Trade Organization, www.wto.org

APPENDIX-III

Incentives provided by government for promotion of export

A. Export Promotion Schemes

Foreign Trade Policy 2015-20 and other schemes provide promotional measures to boost India's exports with the objective to offset infrastructural inefficiencies and associated costs involved to provide exporters a level playing field. Brief of these measures are as under:

(1) Merchandise Exports from India Scheme (MEIS)

Under this scheme, exports of notified goods/ products to notified markets as listed in Appendix 3B of Handbook of Procedures, are granted freely transferable duty credit scrips on realized FOB value of exports in free foreign exchange at specified rate (2-5%). Such duty credit scrips can be used for payment of custom duties for import of inputs or goods, payment of excise duty on domestic procurement, payment of service tax and payment of custom duties in case of EO default.

Exports of notified goods of FOB value upto Rs 25, 000 per consignment, through courier or foreign post office using e-commerce shall be entitled for MEIS benefit.

(2) Service Exports from India Scheme (SEIS)

Service providers of notified services as per Appendix 3E are eligible for freely transferable duty credit scrip @ 5% of net foreign exchange earned.

B. Duty Exemption & Remission Schemes

These schemes enable duty free import of inputs for export production with export obligation. These scheme consist of:

(1) Advance Authorization Scheme

Under this scheme, duty free import of inputs are allowed, that are physically incorporated in the export product (after making normal allowance for wastage) with minimum 15% value addition. Advance Authorization (AA) is issued for inputs in relation to resultant products as per SION or on the basis of self-declaration, as per procedures of FTP. AA normally have a validity period of 12 months for the purpose of making imports and a period of 18 months for fulfilment of Export Obligation (EO) from the date of issue. AA is issued either to a manufacturer exporter or merchant exporter tied to a supporting manufacturer(s).

(2) Advance Authorization for annual requirement

Exporters having past export performance (in at least preceding two financial years) shall be entitled for Advance Authorization for Annual requirement. This shall only be issued for items having SION.

(3) Duty Free Import Authorization (DFIA) Scheme

DFIA is issued to allow duty free import of inputs, with a minimum value addition requirement of 20%. DFIA shall be exempted only from the payment of basic customs duty. DFIA shall be issued on post export basis for products for which SION has been notified. Separate schemes exist for gems and jewellery sector for which FTP may be referred.

(4) Duty Drawback of Customs/Central Excise Duties/Service Tax

The scheme is administered by Department of Revenue. Under this scheme products made out of duty paid inputs are first exported and thereafter refund of duty is claimed in two ways:

i) All Industry Rates : As per Schedule

ii) Brand Rate : As per application on the basis of data/documents

(5) Rebate of Service tax through all industry rates

Refund of service tax paid on specified output services used for export of goods is available at specified all industry rates.

C. EPCG Scheme

(1) Zero duty EPCG scheme

Under this scheme import of capital goods at zero custom duty is allowed for producing quality goods and services to enhance India's export competitiveness. Import under EPCG shall be subject to export obligation equivalent to six times of duty saved in six years. Scheme also allows indigenous sourcing of capital goods with 25% less export obligation.

(2) Post Export EPCG Duty Credit Scrip Scheme

A Post Export EPCG Duty Credit Scrip Scheme shall be available for exporters who intend to import capital goods on full payment of applicable duty in cash.

D. EOU/EHTP/STP & BTP Schemes

Units undertaking to export their entire production of goods and services may be set up under this scheme for import/ procurement domestically without payment of duties. For details of the scheme and benefits available therein FTP may be required.

E. Other Schemes

(1) Towns of Export Excellence (TEE)

Selected towns producing goods of Rs 750 crores or more are notified as TEE on potential for growth in exports and provide financial assistance under MAI Scheme to recognized Associations.

(2) Rebate of duty on "export goods" and "material" used in manufacture of such goods

Rebate of duty paid on excisable goods exported or duty paid on the material used in manufacture of such export goods may be claimed under Rule of 18 of Central Excise Rules, 2002.

(3) Export of goods under Bond i.e. without payment of excise duty

Rule 19 of Central Excise Rules 2002 provides clearance of excisable goods for exports without payment of central excise duty from the approved factory, warehouse and other premises.

(4) Market Access Initiative (MAI) Scheme

Under the Scheme, financial assistance is provided for export promotion activities on focus country, focus product basis to EPCs, Industry & Trade Associations, etc. The activities are like market studies/surveys, setting up showroom/warehouse, participation in international trade fairs, publicity campaigns, brand promotion, reimbursement of registration charges for pharmaceuticals, testing charges for engineering products abroad, etc. Details of the Scheme is available at www.commerce.nic.in

(5) Marketing Development Assistance (MDA) Scheme

Financial assistance is available for exporters having an annual export turnover upto Rs 30 crores for trade fairs, buyer seller meets organized by EPCs/ Trade promotion organizations. MDA guidelines available at www.commerce.nic.in

(6) Status Holder Scheme

Upon achieving prescribed export performance, status recognition as one Star Export House, two Star Export House, three star export house, four star export house and five star export house is accorded to the eligible applicants as per their export performance. Such Status Holders are eligible for various non-fiscal privileges as prescribed in the Foreign Trade Policy.

In addition to the above schemes, facilities like 24X7 customs clearance, single window in customs, self-assessment of customs duty, prior filing facility of shipping bills etc are available to facilitate exports.

APPENDIX-IV

Maximum Residue Levels (MRL) (mg/kg) of pesticides for fresh vegetables

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
1	1-Naphthylacetic acid (Alpha Naphthyl Acetic Acid)	0.05*	0.05*	0.05*	0.05*	0.05*
2	4-bromo-2-chlorophenol (metabolite of Profenophos)	0.01*	0.01*	0.01*	0.01*	0.01*
3	Abamectin (sum of avermectin B1a, avermectinB1b and delta-8,9 isomer of avermectin B1a) (F)	0.02	0.02	1	0.01*	0.05
4	Acephate	0.01*	0.01*	0.02*	0.01*	0.01*
5	Acetamiprid (R)	0.3	0.2	3	0.4	0.3
6	Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin) (F)	0.05	0.01*	0.01*	0.01*	0.01*
7	Allethrin and Bioallethrin	0.01*	0.01*	0.01*	0.01*	0.01*
8	Atrazine (F)	0.05*	0.05*	0.05*	0.05*	0.05*
9	Azadirachtin	1	1	1	1	1
10	Azoxystrobin	1	3	70	3	3
11	Bendiocarb	0.01*	0.01*	0.01*	0.01*	0.01*
12	Benomyl(see carbendazim)	0.1*	0.5	0.1*	0.2	0.1*
13	Bifenthrin (F)	0.1	0.3	0.05*	0.1	0.5
14	Bitertanol (F)	0.01*	0.01*	0.02*	0.01*	0.01*
15	Buprofezin (F)	0.7	1	4	0.05*	2
16	Capropamid	0.01*	0.01*	0.01*	0.01*	0.01*
17	Captafol (F)	0.02*	0.02*	0.05*	0.02*	0.02*
18	Captan (R)	0.02*	0.02*	0.02*	0.02*	0.1
19	Carbaryl (F)	0.01*	0.01*	0.02*	0.01*	0.01*
20	Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim) (R)	0.1*	0.5	0.1*	0.2	0.1*

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
21	Carbofuran (sum of carbofuran and 3- hydroxy-carbofuran expressed as carbofuran)	0.01*	0.01*	0.02*	0.01*	0.01*
22	Carbosulfan	0.01*	0.01*	0.02*	0.01*	0.01*
23	Cartap hydrochloride	0.01*	0.01*	0.01*	0.01*	0.01*
24	Chlorantraniliprole (DPX E-2Y45) (F)	0.3	0.6	20	0.01*	1
25	Chlordane (sum of cis- and trans-chlordane) (F) (R)	0.01*	0.01*	0.01*	0.01*	0.01*
26	Chlorfenapyr	0.01*	0.01*	0.02*	0.01*	0.01*
27	Chlorfenvinphos (F)	0.01*	0.01*	0.02*	0.01*	0.01*
28	Chlorimuron ethyl	0.01*	0.01*	0.01*	0.01*	0.01*
29	Chlormequat	0.05*	0.05*	0.05*	0.05*	0.05*
30	Chlorpropham (F) (R) (A)	0.01*	0.01*	0.02*	0.01*	0.01*
31	Chlorpyrifos (F)	0.05*	0.5	0.05*	0.05*	0.5
32	Chlorpyrifos-methyl (F)	0.05*	0.5	0.05*	0.05*	0.5
33	Clothianidin	0.02*	0.05	1.5	0.2	0.05
34	Cyantraniliprole	0.3	0.01*	0.01*	0.01*	0.01*
35	Cyazofamid	0.2	0.01*	0.02*	0.01*	0.01*
36	Cyfluthrin (cyfluthrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.1	0.1	0.02*	0.2	0.3
37	Cymoxanil	0.1	0.05*	0.05*	0.5	0.05*
38	Cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.2	0.5	2	0.7	0.5
39	Dazomet (Methylisothiocyanate resulting from the use of dazomet and metam)	0.02*	0.02*	0.02*	0.02*	0.02*
40	DDT (all isomers, sum of p,p´-DDT, o,p´-DDT, p,p´-DDE and p,p´-TDE (DDD) expressed as DDT)	0.05*	0.05*	0.05*	0.05*	0.05*
41	Deltamethrin (cis-deltamethrin) (F)	0.2	0.3	0.5	0.2	0.2

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
42	Diafenthiuron	0.01*	0.01*	0.01*	0.01*	0.01*
43	Diazinon (F)	0.01*	0.01*	0.02*	0.01*	0.05
44	Dichlorvos	0.01*	0.01*	0.01*	0.01*	0.01*
45	Dicofol (sum of p, p´ and o,p´ isomers) (F)	0.02*	0.02*	0.02*	0.02*	0.02*
46	Dieldrin (see Aldrin)	0.05	0.01*	0.01*	0.01*	0.01*
47	Difenoconazole	0.3	0.6	2	1	0.8
48	Diflubenzuron (F) (R)	0.05*	0.05*	0.2	0.05*	1
49	Dimethachlor	0.02*	0.02*	0.02*	0.02*	0.02*
50	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	0.02*	0.02*	0.02*	0.02*	0.02*
51	Dimethomorph (sum of isomers)	0.5	1	10	0.01*	1
52	Dinocap (sum of dinocap isomers and their corresponding phenols expressed as dinocap) and Meptyldinocap	0.05*	0.02*	0.05*	0.02*	0.02*
53	Dithiocarbamates (dithiocarbamates expressed as CS2, including maneb, mancozeb, metiram, propineb, thiram and ziram)	2	3	5	1	5
54	Dodine	0.05*	0.05*	0.1*	0.05*	0.05*
55	Emamectin benzoate B1a, expressed as emamectin	0.01*	0.02	1	0.01*	0.02
56	Endosulfan (sum of alpha- and beta-isomers and endosulfan-sulphate expresses as endosulfan) (F)	0.05*	0.05*	0.05*	0.05*	0.05*
57	Endrin (F)	0.01*	0.01*	0.01*	0.01*	0.01*
58	Ethephon	0.05*	0.05*	0.05*	0.05*	0.05*
59	Ethion	0.01*	0.01*	0.01*	0.01*	0.01*
60	Etofenprox (F)	0.01*	0.5	3	0.01*	2
61	Etoxazole	0.02*	0.1	0.02*	0.02*	0.02*
62	Fenamidone	0.2	1	60	0.02*	1
63	Fenazaquin	0.2	0.5	0.01*	0.01*	0.5

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
64	Fenitrothion	0.01*	0.01*	0.02*	0.01*	0.01*
65	Fenpropathrin	0.01*	0.01*	0.01*	0.01*	0.01*
66	Fenpyroximate (F)	0.1	0.2	0.05*	0.05*	0.3
67	Fenthion (fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as parent) (F)	0.01*	0.01*	0.01*	0.01*	0.01*
68	Fenvalerate (any ratio of constituent isomers (RR, SS, RS & SR) including esfenvalerate) (F) (R)	0.02*	0.06	0.05*	0.1	0.05
69	Fipronil (sum fipronil + sulfone metabolite (MB46136) expressed as fipronil) (F)	0.005*	0.005*	0.005*	0.005*	0.005*
70	Flubendiamide (F)	0.15	0.2	0.01*	1.5	0.2
71	Flufenzin	0.02*	0.02*	0.05*	0.02*	0.02*
72	Flusilazole (F) (R)	0.01*	0.01*	0.02*	0.01*	0.01*
73	Gibberellic Acid	0.01*	0.01*	0.01*	0.01*	0.01*
74	HCH (sum of isomers, except the gamma isomer)	0.01*	0.01*	0.01*	0.01*	0.01*
75	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor) (F)	0.01*	0.01*	0.01*	0.01*	0.01*
76	Hexaconazole	0.01*	0.01*	0.02*	0.01*	0.01*
77	Hexythiazox	0.5	0.5	0.5	0.5	0.5
78	Imazethapyr	0.01*	0.01*	0.01*	0.01*	0.01*
79	Imidacloprid	1	0.5	2	5	1
80	Indoxacarb (sum of indoxacarb and its R enantiomer) (F)	0.5	0.5	2	0.02*	0.3
81	Iprobenfos	0.01*	0.01*	0.01*	0.01*	0.01*
82	Isoprothiolane	0.01*	0.01*	0.01*	0.01*	0.01*
83	Kresoxim-methyl (F) (R)	0.05*	0.5	0.05*	0.05*	1
84	Lambda-Cyhalothrin (F) (R)	0.1	0.5	1	0.2	0.1

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
85	Lindane (Gamma-isomer of hexachlorociclohexane (HCH)) (F)	0.01*	0.01*	0.01*	0.01*	0.01*
86	Lufenuron(F)	0.2	0.2	0.05	0.02*	1
87	Malathion (sum of malathion and malaoxon expressed as malathion)	0.02*	0.02*	0.02*	0.02*	0.02*
88	Metalaxyl and metalaxyl-M (metalaxyl including other mixtures of constituent isomers including metalaxyl-M (sum of isomers))	0.05*	0.05*	2	0.05*	0.5
89	Methamidophos	0.01*	0.01*	0.02*	0.01*	0.01*
90	Methomyl and Thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)	0.1	0.02*	2	0.02*	0.02*
91	Metribuzin	0.1*	0.1*	0.1*	0.1*	0.1*
92	Milbemectin (sum of milbemycin A4 and milbemycin A3, expressed as milbemectin)	0.02*	0.02*	0.05*	0.02*	0.02*
93	Monocrotophos	0.01*	0.01*	0.02*	0.01*	0.01*
94	Myclobutanyl (R)	0.1	0.3	0.02*	0.02*	0.5
95	Novaluron (F)	0.1	0.5	0.01*	0.01*	0.6
96	Omethoate	0.02*	0.02*	0.02*	0.02*	0.02*
97	Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)	0.01*	0.01*	0.02*	0.01*	0.01*
98	Oxyfluorfen	0.05*	0.05*	0.05*	0.05*	0.05*
99	Paclobutrazol	0.02*	0.02*	0.02*	0.02*	0.02*
100	Parathion (F)	0.05*	0.05*	0.05*	0.05*	0.05*
101	Parathion-methyl (sum of Parathion-methyl and paraoxon-methyl expressed as Parathion-methyl)	0.01*	0.01*	0.02*	0.01*	0.01*
102	Penconazole (F)	0.1	0.1	0.05*	0.05*	0.2
103	Pencycuron (F)	0.05*	0.05*	0.05*	0.05*	0.05*

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
104	Pendimethalin (F)	0.05*	0.05*	0.6	0.05*	0.05*
105	Permethrin (sum of isomers)	0.05*	0.05*	0.05*	0.05*	0.05*
106	Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)	0.01*	0.01*	0.02*	0.01*	0.01*
107	Phosalone	0.01*	0.01*	0.02*	0.01*	0.01*
108	Phosphamidon	0.01*	0.01*	0.01*	0.01*	0.01*
109	Picoxystrobin (F)	0.01*	0.01*	0.02*	0.01*	0.01*
110	Profenofos (F)	0.01*	0.01*	0.05	0.01*	0.01*
111	Propargite (F)	0.01*	2	0.01*	0.01*	2
112	Propiconazole	0.05*	0.05*	0.05*	0.05*	0.05*
113	Pyraclostrobin (F)	0.5	0.3	2	0.02*	0.5
114	Pyridalyl	0.01*	1	0.01*	0.01*	2
115	Pyriproxyfen (F)	0.05*	1	0.05*	0.05*	1
116	Quinalphos (F)	0.05*	0.05*	0.05*	0.05*	0.05*
117	Quizalofop, incl. quizalfop-P	0.4	0.4	0.4	0.4	0.4
118	Spinosad: sum of spinosyn A and spinosyn D, expressed as spinosad (F)	0.2	1	10	0.5	2
119	Spiromesifen	0.3	0.5	0.02*	0.02*	0.5
120	Spirotetramat and its 4 metabolites BYI08330-enol, BYI08330-ketohydroxy, BYI08330-monohydroxy, and BYI08330 enol-glucoside, expressed as spirotetramat (R)	0.2	2	4	1.5	2
121	Tau-Fluvalinate (F)	0.01*	0.15	0.01*	0.5	0.01*
122	Tebuconazole (R)	0.2	0.4	0.05*	2	0.6
123	Tebufenozide (F)	0.1	0.5	0.05*	0.05*	1
124	Tetracycline	0.01*	0.01*	0.01*	0.01*	0.01*
125	Thiacloprid (F)	0.3	0.5	5	0.2	1
126	Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)	0.5	0.2	1.5	0.2	0.7

Sr. No.	Details of agrochemicals	Bitter Gourd	Brinjal	Curry Leaves	Drum-sticks	Green Chillies
127	Thiodicarb	0.1	0.02*	2	0.02*	0.02*
128	Thiophanate-methyl (R)	0.1*	2	0.1*	0.1*	0.1*
129	Tolfenpyrad	0.01*	0.01*	0.01*	0.01*	0.01*
130	Transfluthrin	0.01*	0.01*	0.01*	0.01*	0.01*
131	Triacontanol	0.01*	0.01*	0.01*	0.01*	0.01*
132	Triadimefon and triadimenol (sum of triadimefon and triadimenol) (F)	0.2	1	0.1*	0.1*	1
133	Triazophos (F)	0.01*	0.01*	0.01*	0.01*	0.01*
134	Trichlorfon	0.01*	0.01*	0.02*	0.01*	0.01*
135	Tricyclazole	0.05*	0.05*	0.05*	0.05*	0.05*
136	Tridemorph (F)	0.01*	0.01*	0.02*	0.01*	0.01*
137	Trifloxystrobin (F) (R)	0.2	0.7	10	0.02*	0.3
138	Triforine	0.01*	0.01*	0.01*	0.01*	0.01*
139	Validamycin	0.01*	0.01*	0.01*	0.01*	0.01*
140	Zinc	50***	50***	50***	50***	50***
141	Copper	30***	30***	30***	30***	30***
142	Lead	0.1	0.1	0.3	0.1	0.1
143	Cadmium	0.05	0.05	0.2	0.05	0.05
144	Arsenic	1.1***	1.1***	1.1***	1.1***	1.1***
145	Mercury	1.0***	1.0***	1.0***	1.0***	1.0***

* EU-MRL set at LOQ (mg/kg) as per http://ec.europa.eu/sanco_pesticides/public/index.cfm?event=substance.selection

*** Reference for MRL on heavy metals: Commission Regulation (EC) No 1881/2006 of 19th December 2006

(F) = Fat soluble

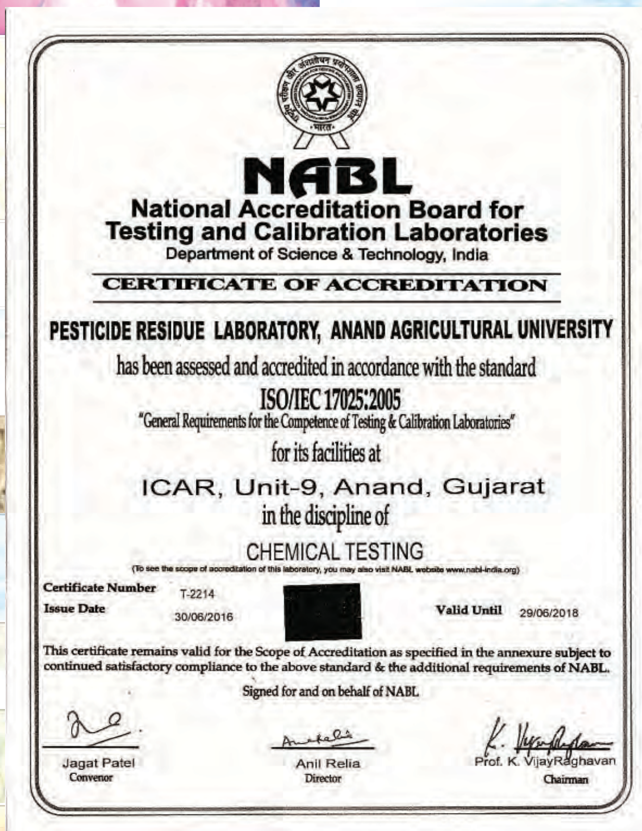
(R) = Residue definition includes metabolites/isomers

Source : APEDA

Pesticide Residue Laboratory
Anand Agricultural University, Anand

The only laboratory of the State Government with NABL 17025:200 5 in the field of Pesticide Residues.

The laboratory is actively involved in analysis of market samples like vegetables, fruits, cereals, pulses, animal feed and milk for consumer exposure.



NABL
National Accreditation Board for Testing and Calibration Laboratories
Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

PESTICIDE RESIDUE LABORATORY, ANAND AGRICULTURAL UNIVERSITY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

ICAR, Unit-9, Anand, Gujarat

in the discipline of

CHEMICAL TESTING

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number T-2214
Issue Date 30/06/2016 [redacted] Valid Until 29/06/2018

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

Jagat Patel, Convenor | Anil Relia, Director | Prof. K. VijayRaghavan, Chairman

The scope includes vegetables, fruits, cereals, pulses, milk and water.

Core laboratory of the western region of the country under Monitoring of pesticide residues at National level, sponsored by Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India

Residue Analyst
AINP on Pesticide Residues,
ICAR, Unit-9
Anand Agricultural University
Anand – 388110, Gujarat
(O) 02692 652807, ainp_pr_anand@yahoo.co.in


યુનિવર્સિટી ભવન
આણંદ કૃષિ યુનિવર્સિટી, આણંદ
ANAND AGRICULTURAL UNIVERSITY ANAND.


बंसीलाल अमृतलाल कृषि महाविद्यालय