





Maharashtra Agribusiness Network (MAGNET) Project

GAP Module - Okra



1 ©2022 Grant Thornton India LLP. All rights reserved.

Table of Content

/arieties
Cultural practices
Backward Integration (Good Agricultural Practices)
Crop
Quality
ntegrated Pest Management
larvesting
Post Harvest Management
Processing and Exports

^{2 ©2022} Grant Thornton India LLP. All rights reserved.

Varieties

Commercial varieties of Okra

Common varieties		
Variety		
Pusa Makhmali		
Pusa Sawani		
IIHR 20-31		
Punjab Padmini		
Arka Anamika		
Parbhani Kranti		
Selection-2		
Arka Abhey		

. ..

	Hybrid varieties grown for Export purposes			
Variety		Seed Company/ Supplier		
	Sobha	Nath Seeds		
	Sungrow 35	Sungrow		
	Vaishali	Indo-American Hybrid Seeds		
	Vijay	Indo-American Hybrid Seeds		
	Adhunik	Century Seeds		
	Pancholi	Century Seeds		
	Hybrid 64	Mahyco		
	Azad Kranti	Beejo Sheetal		



4 ©2022 Grant Thornton India LLP. All rights reserved.

Culture Practices

Climate

Suitable Temperature

- Average Monthly temperature 20 35 C.
- Okra is susceptible for Frost.
- Day Temperature above 42 C may lead to flower & bud dropping.
- Optimum temperature for seed germination 25 -30 C & do not germinate or Prolong germination below 17

Growing Season:

- Wet Season: May July
- $\circ~$ Spring / Winter: Oct Dec
- Summer Season: Feb March



^{6 ©2022} Grant Thornton India LLP. All rights reserved.

Growing Conditions

Seed Rate:

- i) 3.75 5.0 kg/ ha (one seed/ hill) 60 X 30 cm
- ii) 10-12kg/ ha- For high density spacing (3 X 5 cm)

Spacing:

	Row to Row	Plant to Plant
1	60 cm	30 cm
2	30 cm	5 cm



^{7 ©2022} Grant Thornton India LLP. All rights reserved.

Soil & Land Preparation

Well drained manured sandy loam soils are ideal for the best cultivation.

Ideal pH: 6.5 - 7.5

Deep Ploughing & Harrowing (expose the soil to hot sun for 10-15 days in summer season)

Keeping the soil weed free to reduce soil pathogen as well as to reduce secondary host for sucking pest.

Applying 25 tonnes of well decomposed FYM/ ha followed by harrowing to mix in the soil.

Prepare ridges & furrows.



^{8 ©2022} Grant Thornton India LLP. All rights reserved.

Soil & Land Preparation

Irrigate as and when required based on the soil type and the local practices.

Ideal practice: Irrigating the field a day prior of sowing and dibbling one seeds /hill & irrigate the field immediately for quick & better establishment.

Spray the pre-emergent weedicide of pendimethalin@30% EC for controlling the primary weeds immediate after the sowing (best results before 36 hours).

Irrigate the field a day prior or before Transplanting

Ideal time for transplanting is between 3:00 PM to 6:00 PM evening hours & irrigate the field immediately after transplanting for quick & better establishment.

Advisable to adopt technologies like drip irrigation for intensive utilization of water & Mulching for better crop growth & development & also mulching will help to restrict weeds & enhance quality of produce.



^{9 ©2022} Grant Thornton India LLP. All rights reserved.

Fertilizer Application

Applying the fertilizer as per the recommendations.

Fertilizer application varies with soil fertility.

Fertilization composition(NPK) :150:100:100kg/ ha

Requirement for Basal dose: 38:100:33 NPK kg/ha

Requirement for First top dressing: 38:0:33 NPK kg/ha at 30th day

Requirement for Second top dressing: 38:0:33 NPK kg/ha at 60th day



^{10 ©2022} Grant Thornton India LLP. All rights reserved.

Fertilizer Application

Requirement for Third top dressing:38N kg/ha at 90th day.

Ideal practice: Using Zinc & Mg as micronutrients at basal application

Ideal practice: Earthing up is suggested after applying of fertilizer at all the stages & followed irrigation.

Ideal practice: Applying Magnesium Sulphate 5kg upto from 30 to 60 days after planting once in a week.

Ideal practice: Adjusting quantity of N as per the crop growth and using only white colour MOP

Total requirement of nutrients is inclusive of basal dose uptake



^{11 ©2022} Grant Thornton India LLP. All rights reserved.

Growth Regulator

Cycocel @ 100 ppm / Lehosin @ 500 ppm at 5-6 leaf stage- to check excess growth during rainy season apply the same before flowering for seed production / size.

To enhance growth during winter & germination-GA3 @ 100 ppm



^{12 ©2022} Grant Thornton India LLP. All rights reserved.

Okra Crop

Whole Okra Plant







14





Okra Growing Requirements





Backward Integration

Good Agricultural Practices in Okra

Use of hybrid seeds, Nutrient and water management

Plant protection against diseases, insects and pests



^{18 ©2022} Grant Thornton India LLP. All rights reserved.

Do's

- 1. Timely sowing
- 2. Field sanitation
- 3. Always use freshly prepared neem seed kernel extract (NSKE).
- 4. Apply pesticides only when required
- 5. Wash okra fruits before consumption

Dont's

- 1. Don't apply more than the recommended dose of the pesticide
- 2. Don't repeat the same pesticide consecutively
- 3. Don't apply mixture of pesticides
- 4. Don't apply highly hazardous insecticides like monocrotophos in vegetables
- 5. Don't apply pesticides just before harvesting
- 6. Don't consume produce till 3-4 days after application of pesticides

Source : Extension leaflet of National Centre for Integrated Pest Management (ICAR)

^{19 ©2022} Grant Thornton India LLP. All rights reserved.

GrantThornton

Organic Production

- Different types of organic manure that as cow dung, poultry manure, and compost have been used to upgrade the soil's physical condition, especially, structure and drainage and increase nutrient and organic matter levels.
- As against this the inorganic fertilizer largely only improves chemical properties.



^{20 ©2022} Grant Thornton India LLP. All rights reserved.



Qualified agriculturists along with local partners co-ordinate all field activities



Integrated Pest Management

Okra – Insects, Pests and Remedies

Key Pests

Proposed Remedy/ies

Photo

Leaf hopper

Nymphs and adults of leaf hopper are pale green and move diagonally. The affected leaves turn yellowish and curl. In case of heavy infestation the leaves turn brick red and crumble.

Shoot and fruit borer

When the crop is young, larvae bore into tender shoots and tunnel downwards which wither, drop down and growing points are killed. In fruits, the larvae bore inside these and feed on inner tissues which become deformed in shape with no market value. Soil application of Carbofuran 3 G at the time of sowing effectively controls the pest. Spraying the crop with Monocrotophos (0.05%) at periodical intervals starting with the appearance of the pest provides good control.



Destroy infected parts. If the pest population is high, spray Spinosad by 1ml/ Ltr water or Fluben-diamide by 50ml/ acre added in 200 Ltr water. A spray of carbaryl or endosulfan or deltame-thrin is effective for the control of borer. Clean cultiva-tion and summer ploughing is also helpful in reducing pest infestation





Okra – Insects, Pests and Remedies

Proposed Remedy/ies **Key Pests** Photo **Red Spider Mite** Adult: Ovate, reddish brown. Spray Larvae & nymphs are greenish red while adults wettable sulphur 50 WP 1.0 kg (or) a re oval, reddish brown in colour. Mites feed dicofol 1.0 L or abamectin 1.9 EC @ on the under surface of leaves and the 500 ml which is a new acaricide or affected leaves gradually start curling and get fenpropathrin 30 EC 250-340 ml in wrinkled and crumpled. 500 L water/ha. **Aphid Pests** Destroy affected parts as soon as an

In severe infestation, they cause curling and deformation of young leaves. They secrete honeydew like sub-stance and black, sooty mould is developed on affected parts.

Destroy affected parts as soon as an infestation is noticed. 20 to 35 days after sowing, apply Dimethoate 300 ml/150Ltr of water, and repeat if necessary.





Okra – key diseases and Remedies

Key Pests

Proposed Remedy/ies

Yellow vein mosaic disease Interwoven network of yellow veins encompassing with islands of green tissues on leaves. Later, entire leaves turn yellow. This disease, spread by white fly, is economically most important disease. Use resistant varieties for cultivation. Take away and destroyed diseased plants from the field. For controlling the whitefly, take spray of Dimethoate by 300ml/200Ltr of water. Wilt the plant remains stunted and gave a wilted and yellowish appearance. The stem turns dark near to the soil surface and lastly the entire plant wilts. Okra must not be rotated with crops like eggplant, tomato, and chilli. It must not be grown in the infested field for 3 years. Use seed from healthy plants only and treat the seed with 3 g of Thiram or Captain per kg seed before sowing Sowing of YVMV resistant hybrids viz. Makhmali, Tulsi, Anupama-1 and Sun-40 etc. Use resistant varieties like Arka Anamika and Arka Abhay

Photo



4 to 5 foliar sprayings of Dimethoate (0.05%) or Oxydemeton methyl (0.02%) at the 10-day interval, follow-ed by 1 or 2 sprays of mineral oil (2%). Apply Carbo-furan @ 1kg/ha at the time of sowing.



Okra – key diseases and Remedies

Key Pests

Proposed Remedy/ies

Root Knot Nematodes Microscopic, soil borne, vermiform pests. They feed vigorous on roots and cause galling of roots. Affected plants are weak, stunted with yellow leaves.

Cultural control methods such as rotation with non-host crops for example cereals, fallowing, and deep ploughing 2 to 3 times in summer months is suggested. Application of Nemagon with irrigation before sowing is suggested to protect the seedling in its early stage of plant growth

Photo



Powdery mildew

White powdery also on fruits. In severe interval, or Tridemorph by 5ml or premature defoliation and fruit times with a 10 days interval. Fruit quality gets drop. deteriorated and remains small in size.

If you observed infestation in the field, growth is take a spray of Wettable Sulphur detected on young leaves and 25gm/10Ltr of water, 4 times at 10 days conditions, one can observe Penconazol by 10ml/10Ltr of water for 4





Biological Controls and Natural Insecticides for Okra Pests and Diseases

- Some natural predators of Okra pests include lady beetles, lacewings, spiders, and parasitic wasps.
- Clover, parsley, and alyssum will help attract beneficial insects to farm.
- One more biological weapon to protect your Okra crop is Bacillus thuringiensis, also called Bt, a natural bacteria that attacks and kills several insects.





Pesticide Residue Control Recommendations

- 1. Pesticide Residue is controlled by restricting application of pesticides in the field.
- 2. Using lower dose and low toxicity pesticides.
- 3. Usage of pesticides with newer mode of action to combat resistance.
- 4. Using Botanicals as pesticides and leads to newer pesticides.
- 5. Recommendation of using Biopesticides.
- 6. Selection of insecticides focusing on the rate of application and application method.
- 7. Awareness and Education of farmers on the usage of pesticides and insecticides.



^{28 ©2022} Grant Thornton India LLP. All rights reserved.

Integrated Pest Management Strategies

Grow maize/sorghum on borders as a barrier/trap crop for the entry of shoot & fruit borer adults.

Set up yellow sticky and delta traps for white fly etc.

Erection of bird perches @ 10/acre in the field for facilitating bird predation.

Give two to three sprays of NSKE @ 5% alternating with sprays of pesticides, if needed, for leaf hopper, white fly, mites and aphids etc. Leaf hopper, if crosses ETL (5 hoppers/plant), spray imidacloprid 17.8 SL @ 150 ml/ha. This will be effective in controlling other sucking pests as well.



^{29 ©2022} Grant Thornton India LLP. All rights reserved.

Integrated Pest Management Strategies

Release egg parasitoid Trichogramma chilonis @ 1-1.5 lakh/ ha starting from 30-35 days after sowing, 4-5 times at weekly interval for shoot & fruit borer. Shoot & fruit borer, if crosses ETL (5.3 % infestation), spray cypermethrin 25 EC @ 200 g a.i/ha

Rogue out the YVMV affected plants, if any, from time to time.

Periodically remove and destroy the borer affected shoots and fruits.

Need based application of chemical pesticides viz. imidacloprid 17.8 SL @ 150 ml/ha, cypermethrin 25 EC @ 200 g a.i/ha (0.005%), quinalphos 25 EC @ 0.05% or Propargite etc. 57 EC @ 0.1 % for control of leaf hoppers, aphids, white flies, borers and mites

Orant Thornton

^{30 ©2022} Grant Thornton India LLP. All rights reserved.

Safety Concerns

YVMV (Yellow Vein Mosaic Virus) & ELCV (Enation Leaf Curl Virus)

Vector: White fly, other issues in Okra Pod Borer, Powdery mildew and may in future wilt will be an emerging issues in okra



^{31 ©2022} Grant Thornton India LLP. All rights reserved.

Remedies / Control Measures

Set up yellow sticky trap to monitor whitefly population (Yellow polythene sheet painted with sticky gum or grease (3 feet x 2 feet size & 1.5 feet above the ground).

Drenching of Saaf @ 1% to avoid the soil borne diseases.

At 10 DAS (Days After Sowing) spray Lancergold @ 500g/ acre is recommended & should start when true leaves emerge out on the plant this is mainly to control miners & cutworms (this will help us to save the young seedlings.

At 20 DAS spray Saaf @ 300 g/acre

At 25 DAS Balraj (Lamda cyhalothrin) @ 200 ml/ acre or Lancer gold @ 500 g / acre or Viraat (Quinalphos 20 + Cyper 3) @ 350 ml/ acre.



^{32 ©2022} Grant Thornton India LLP. All rights reserved.

Remedies / Control Measures

At 40 DAS spray Lancergold @ 500g/ acre or thiamethoxam @ 40 g / acre or Acetamiprid @ 30g/acre to control sucking pest.

At 45 DAS spray Saaf @400g/ acre to restrict the foliar diseases viz., leafspots & blight.

At 55 DAS spray Lancergold @ 500 g/acre or Balraj (Lamda Cyhalothrin) @ 200 ml/acre for controlling sucking pest & fruit borer as well.

At 70 DAS spray Lancergold @ 500 g/acre or Acetamiprid @ 30 g/acre. Continue the sprays mainly to control sucking pest based on the pest infestation & crop duration.



^{33 ©2022} Grant Thornton India LLP. All rights reserved.

Care

- To avoid YVMV infestation please Sowing 3 lines of Maize/ Jowar around okra field which may prove beneficial for controlling YVMV
- Use imidacloprid treated seeds
- Don't use systemic pyrethroid
- Avoid excess use of N, Fibre formation in the fruit starts from the 5th 6th day of fruit formation and a sudden increase in fibre content from 9th day is observed



^{34 ©2022} Grant Thornton India LLP. All rights reserved.

Pesticide Residue Control

- Due to repeated detection of exceeding levels of residues of agrochemicals in okra exported from India to EU countries during the recent past, the European Commission has issued Regulation (EU) No. 885/2014 dated 13.08.2014 implementing Regulations (EU) No. 91/2013 dated 31.01.2013 laying down specific conditions applicable to the import of okra from India imposing requirement of Health Certificate conforming that all consignments of okra from India to EU comply with the maximum residue levels (MRLs) of agrochemicals.
- As per RASSF (The Rapid Alert System for Food and Feed) Annual Report 2020, the pesticide residues notifications went up by 492%, to 166 and this catapulted the pesticide residues suddenly to second rank in the top 10 list of hazards for all products imported into Europe.



^{35 ©2022} Grant Thornton India LLP. All rights reserved.

Pesticide Residue Control

- Due to repeated detection of exceeding levels of residues of agrochemicals in okra exported from India to EU countries during the recent past, the European Commission has issued Regulation (EU) No. 885/2014 dated 13.08.2014 implementing Regulations (EU) No. 91/2013 dated 31.01.2013 laying down specific conditions applicable to the import of okra from India imposing requirement of Health Certificate conforming that all consignments of okra from India to EU comply with the maximum residue levels (MRLs) of agrochemicals.
- As per RASSF (The Rapid Alert System for Food and Feed) Annual Report 2020, the pesticide residues notifications went up by 492%, to 166 and this catapulted the pesticide residues suddenly to second rank in the top 10 list of hazards for all products imported into Europe.



^{36 ©2022} Grant Thornton India LLP. All rights reserved.

Pesticide Residue Testing Laboratories

- Keeping this mind, APEDA issued Trade Notice No: APEDA/FV/Q/2015 Dated: 18.06.2015 titled 'PROCEDURE FOR EXPORT OF OKRA TO EUROPEAN UNION' in which it listed the names and contact details of authorized laboratories for sampling and analysis and issue of health certificate for export of Okra to EU.
- The updated list is included in the next slide (dated: 28.04.2017)



^{37 ©2022} Grant Thornton India LLP. All rights reserved.

*List of authorized laboratories for sampling & analysis and issue of health certificate for Export of okra to EU (Dated: 28.04.2017)

No.	Name and contact details of the laboratory	Scope
Nati P.B. Tel.:	onal Research Centre on Grapes (Indian Council of Agricultural Research) No. 3, Manjri Farm Post, Solapur Road, Pune 412 307 +91-20-26956002 EPABX: +91-20-26956000 Fax: +91-20-26956099	NRL for products of plant origin
nreg	rapes@gmail.com; apedanrl@gmail.com;	
1	Arbro Pharmaceuticals Limited Analytical Division 4/9 Kirti Nagar Industrial Area New Delhi 110 015 Tel : 011-45754575, 9871700488 Fax: 011-45754545 arbrolab@arbropharma.com; saurabharora@arbropharma.com;	ISO/IEC-17025 accredited by NABL & APEDA recognized lab
2	Centre for Food Testing Bharati Vidyapeeth Deemed University 5 th Floor Centre for Advanced Research in Pharmaceutical Sciences Building Bharati Vidyapeeth Educational Complex Erandwane Pune 411 038 Tel: 020-65737381.82.83 cft.bvdu@gmail.com;	-do-
3	Delhi Test House A-62/3 G. T. Karnal Road Industrial Area Opp Hans Cinema Azadpur Delhi 110 033 Tel : 011-27437327, 27435509, 27427672 Telefax: 011-27435509, 27437327 info@delhitesthouse.com: dg@delhitesthouse.com:	-do-
4	Envirocare Labs Pvt. Ltd. A-7 MIDC Wagle Industrial Estate Main Road Thane 400 604 Tel: 022-25838286-88 Fax: 25838289 info@envirocare co.in:	-do-
5	Geo Chem Laboratories Pvt. Ltd. Pragati, Adjacent to Crompton Greaves Kanjur Marg (E) Mumbai 400 042 Tel: 022-61915100 Fax: 022-61915101 sureshbabu.p@geochem.net.in; laboratory@geochem.net.in;	-do-
6	Interfield Laboratories XIII/1208, Interprint House Kochi 682 005 Tel: 0484-2217865, 2210915, 221838 mail@interfieldlaboratories.com:	-do-
7	MicroChem Silliker Pvt. Ltd. MicroChem House A-513 TTC Industrial Area MIDC Mahape Navi Mumbai 400 701 Tel: 022-27787800 vidba gangar@microchem.co.in; dbanya dbumal@microchem.co.in;	-do-
8	National Collateral Management Services Limited (NCML) Team Towers, 4 th Floor, Plot No. A-1/2/A Industrial Park IDA-Uppal Hyderabad 500 039 Tel: 040-27176840 ganesh r@nemsl.com; quality@neml.com; commerade@nemsl.com;	-do-
9	National Horticultural Research & Development Foundation (NHRDF) Pesticide Residue Analysis Laboratory Research Complex Chittegoan Phata P.O. Darna Sangvi Tq. Niphad Nashik Aurangabad Road Nashik 422 003 Tel: 02550-237551, 237816 Fax: 237947 nhrdf nsk@sancharnet.in;drpkgupta11@gmail.com:	-do-
10	Reliable Analytical Laboratories Pvt. Ltd. 125/139 Indian Corporation Mankoli Gundavli Bhiwandi Thane 421 302 Tel: 02522-398100 harshal@reliablelabs.org; rashmi@reliablelabs.org; vikas@reliablelabs.org;	-do-
11	SGS India Pvt. Ltd. Opposite to State Bank of India 28 B/1 (SP), 28 B/2 (SP) 2 ^{ad} Main Road Ambattur Industrial Estate Chennai 600 058 Tel: 044-66693109 Fax: 24963075 av.abraham@sgs.com; dipiyoti.banerjee@ses.com;	-do-
12	SMS Labs Services Private Limited 39/6 Thiruvallur High Road Puduchatrm Post Thirumazhisai Via Poonamalee TK Chennai 600 124 Tel: 044-26811997, 26811993 Cell: 09444418694 sharadhangm@gmail.com; smslab2012@yahoo.in;	-do-

*List of authorized laboratories for sampling & analysis and issue of health certificate for Export of okra to EU (Dated: 28.04.2017)

13	Shriram Institute for Industrial Research 14-15 Sadarmangla Industrial Area Whitefield Road Bangalore 560 048 Tel: 080-28410172, 28410165/166/167 Fax :28410189 sribglr@vsnl.com; sribglr@bgl.vsnl.net.in; ark@shriraminstitute-bangalore.org;	-do-
14	TUV India Pvt Ltd. Survey No: 423/1 & 3/2 Near Pashankar Auto (Baner) Sus-Pashan Road Pune 411 021 Tel: 020-67900000 vkgupta@tuv-nord.com; foodlab@tuv-nord.com; mumbai@tuv-nord.com;	-do-
15	TUV Sud South Asia Pvt. Ltd. No. 151, 2nd C Main, 2nd stage Peenya Industrial Estate Bangalore 560058 Tel: 080-67458000 Fax: 080-67458058 suresh.kumar@tuv-sud.in; meena.mariappan@tuv-sud.in;	-do-
6	Vimta Labs Ltd. Plot No. 5 SP Biotech Park Genome Valley Shameerpet Mandal RR District Hyderabad 500 078 Tel: 040-39848484 Fax: 040-27263657 quality@vimta.com;	-do-
7	Edward Food Research & Analysis Centre Ltd. (EFRAC) Subhas Nagar PO Nilgunj Bazar, Barasat Kolkata 700 121 Tel: 033-71122800 Fax: 71122801 efraclab@efrac.org; balwinderbajwa@efrac.org; arijitbhowmick@efrac.org;	-do-
18	Eurofins Analytical Services India Pvt. Ltd. #540/1, Doddanakundi Industrial Area2, Hoodi, Whitefield, Bangalore 560 048 Tel: 080-30982500 Fax: 41680405 SanjeevKhatri@eurofins.com; GouriSatpathy@eurofins.com;	-do-

*Authorization of laboratories is a continuous process and could be downloaded from website: www.apeda.gov.in



Harvesting and Quality Management

Quality Indices - Minimum Requirements

Fresh okra shall be:

- Whole with the peduncle length of approximately 2 cm attached to the pod and intact tip.
- Firm and intact.
- Clean
- Fresh in appearance and not stringy.
- Tender and well formed, such that they snap cleanly with no protruding fibres when broken.
- Uniform in colour depending on variety.
- Free from damage and disease.
- Free from foreign smell or taste.



^{40 ©2022} Grant Thornton India LLP. All rights reserved.

Grading of Okra

- The different grades of the okra are based on the freshness, tenderness, colour, shape, decay, scarred, bruised, cuts, insects, dirt, wormhole, and trim.
- Based on the length of the pod, four classifications performed are small, medium, large and extra-large.

Classes	Length (cm)
Small	6-8
Medium	9-15
Large	16-21
Extra large	>22



Grading of Okra



Fig 1: Before Grading



Fig 2: After Grading



Post Harvest Management

Fresh Okra Storage Conditions

Temperature	7.5 - 10 °C
Relative Humidity	90 - 95 %
Storage Period	1-2 weeks



^{©2022} Grant Thornton India LLP. All rights reserved.

Processing and Exports

Value Chain in Vegetables





Packhouse Operations of Okra









Export Specifications for Okra

- 3-5 inch in length
- green in colour
- Tender
- Packaged in 5 kg boxes
- Mode of Transport:
 - By Air or
 - By Sea



^{49 ©2022} Grant Thornton India LLP. All rights reserved.

Specification details of the CFB box

Νο	Specification	Slide Type	Ring *Flap Tuck-In-Type	RSC(regular slotted container)	Tray with LID
1.	Material for construction	5-ply CFB	5-ply CFB	5-ply CFB	5-ply CFB
2.	Grammage (g/m sq.)	*230X140X	*230X140X	*230X140X	*230X140X
	(outer to inner)	140X140	140X140	140X140	140X140
3.	Bursting strength kg/cm	Min. 10.00	Min. 10.00	Min. 10.00	Min. 10.00
	sq.				
4.	Puncture resistance	Min250	Min250	Min250	Min250
	inches/test inch				
5.	Compression strength Kg.	Min.350	Min.350	Min.350	Min.350
6.	Cobb (30 minutes g/m	Max.130	Max.130	Max.130	Max.130
	sq.)				



Packaging of Fresh Okra

Packing in CFB Box



Packing in insulated CFB Box





Packaging of IQF Frozen Okra

Tray Packing



Poly bag vacuum pack





Export and Export Potential

Domestic strengths for exporting okra:

- India is largest producer of okra in the world.
- In India, a number of superior cultivars and even hybrids are available for cultivation, with a productivity ranging between 15-20 tons/ha.
- Okra is available in India throughout the year and production can be tailored according to demand.
- There is excellent research support for okra, because IIHR, Bangalore, IARI, New Delhi, IIVR, Varanasi and SAUs are located in different regions of the country to provide solutions to various problems in its cultivation.
- APEDA has sanctioned Agri Export Zones in Punjab, U.P, Gujarat, A.P, Bihar, West Bengal for enhancing export of vegetables including okra.



^{53 ©2022} Grant Thornton India LLP. All rights reserved.

Specifications of Exported Okra

- 3-5 inches in length,
- green in colour
- tender.
- Export Packing
 - Packed in consumer packs of LDPE or PP (polypropylene)
 - Twenty consumer packs of 250 gm each are placed in 2X2X5 pattern in a 5 Kg CFB box.



Flow Diagram of Essential Operations of Okra Exporters/ Packers



Documents required for exports

Documents related to goods

- Invoice
- Packing List
- Certificate of origin

Documents related to shipment

- Mate Receipt
- Shipping Bill
- Bill of handing
- Airway Bill

Documents related to Payment

- Letter of Credit (L/Č)
- Bill of Exchange

Documents related to quality of goods

- GLOBALGAP Certification
- Health Certificate
- Phytosanitary certificate

Organic Certification

 Certificate indicating material produce is based on organic farming.

Documents related to Foreign Exchange Regulations

• GR Form: Documents required by RBI which assures to RBI that the exporter will realize the proceeds of goods within 180 days from the date of Shipment.

Other Document

 Bank Realization Certification (BRC): This is the advice given by Foreign Exchange Bank after the realization of money from Importer.



^{56 ©2022} Grant Thornton India LLP. All rights reserved.

Thank You