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## Annexure 1 : Schedule (Farmers)

Questionnaire No		Date of survey	
District		Crop :	

### A. House hold / Demographic Information:

A1	Name	
A2	Age	
A3	Educational qualification	1. Illiterate 2. Primary 3. Secondary 4. Higher secondary 5. Degree and above
A4	Gender	1. Male 2. Female
A5	Marital Status	1. Single 2. Married 3. Divorced 4. Widowed
A6	Total family size	
A7	Source of Income	a. Agriculture b. Business c. Service d. Mixed.....
A8	Distance from the nearest market(km)	
A9	Distance from main road(km)	
A10	How many years have you been working in organic cultivation?	(Years)
A11	Have you received any form of training on organic farming?	1. Yes 2. No
A12	If yes, who were the facilitators?	1. Extension Officers 2. NGO 3.FPC 4. Farmers Association 5.Other (Specify)

### B. Mapping the Value Chain. (Product and Services )

#### B. PRODUCTION

B1.	How many bigha of land you are holding. (Bigha/Ha)												
	Own land	Leased in Land	Leased out land	Land under field crop	Land under horticultural crops	<i>Land under organic farming</i>							
						<i>Own</i>	<i>Leased in</i>	<i>Leased out</i>					
B2.	How did you acquire the land?			1. Own/ Inherited 2. Purchased 3. Rented 4. Lease 5. Sharecropping 6. Family land 7. Other (Specify)									
B3.	What are the source of seed supplies with percentage of share.(Total 100%)			1. Government scheme (     %) 2. Own stock (     %) 3. Other farmer (     %) 4. Open market (     %) 5. Seed selling centres (     %) 6. Other (Specify)									
B4.	What is the source of organic manure and vermicompost?			1. Self made farmer 2. Government scheme 3. Open market 4. Other 5. Others (Specify)									
B5.	Information on organic crop cultivated(Approx.) :												
	Crops	Grades	Area of land	Total Production (qtl)	Own consumption (qtl)	Commercial purpose (qtl)	Wastage (Kg)						
B6.	Time spread of the agricultural activity:												
	Activity: Months	Sep	Oct	Nov	Dec	Jan	Feb	Ma	Apr	Ma	Jun	Jul	Aug
B6i	Planting/ flowering time												
B6i	Harvesting												



B6i ii	Marketing& Selling												
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### C. PRODUCT FLOW

C1	In what form do you sell the final products			i. Fresh green	ii. Processed	iii. Other	
C2	Where do you sell your product			i. Farm gate	ii. Market	iii. Both	
C3	Information about crops sold						
	Months/Time period	Total output	Selling Price	Total Revenue	To Whom	Where (Place of sale)	
C.3i.							
C.3ii.							
C.3.v.	Who are your customers (Tick).	1. FPC 5. Households	2. Wholesalers 6. Other (Specify)	3. Traders	4. Exporters		
C4.	Do farmers own any organic shop or store in market of organic products					1. Yes    2. No	

### D.1. COMPUTATION OF COST /ECONOMIC ANALYSIS

Sl No.	Item	No.	Year of purchase	Purchase Value (Rs.)	Average life (Years)	Annual repairs
D.1.i	Tractor/Power tiller					
D.1.ii	Sprayer					
D.1.iii	Pumset					
D.1.iv	Bullock cart/Thela					
D.1.v.	Iron Plough					
D.1.vi.	Levellers					
D.1.vii.	Open/ Bore well					
D.1.viii	Minor implements i. ii					

### D.2. : Inputs used

S. No.	Particulars	Unit	Price	Amount
D.2.i.	Seed/Planting material			
D.2.ii.	Farm yard manure			
D.2.iii.	Green / poultry manure			
D.2.iv.	Vermi compost			
D.2.v.	Biofertilizers			
D.2.vi.	Biopesticides			
D.2.vii.	Mulching			
D.2.viii.	Trap cropping			
D.2.ix.	Irrigation charges			
D.2.x.	Land revenue			
D.2.xi.	Rental value of land			
D.2.xii.	Others			

### D.3: Labor use pattern

Sl. No.	Particulars	No. of times	Family labor	Hired labor	Total

			M	W	BP	ML	M	W	BP	ML	M	W	BP	ML
D.3.i.	Ploughing	3												
D.3.ii.	FYM applications													
D.3.iii.	Harrowing													
D.3.iv.	Organic manure													
D.3.v.	Seed bed preparation													
D.3.vi.	Sowing/Transplanting													
D.3.vii.	Hand weeding													
D.3.viii.	Spraying bio pest.													
D.3.ix.	Irrigation													
D.3.x.	Harvesting													
D.3.xi.	Threshing													
D.3.xii.	Transportation													
D.3.xiii.	Cleaning													
D.3.xiv.	Drying													
D.3.xv.	Bagging													
D.3.xvi.	Storage													
D.3.xvii.	Others (if any)													

Note : M= Men, W= Women, BP=Bullock pairs, ML= Machine labor

(Wage rate- Men: Rs...../day, Women : Rs...../day, Bullock pairs:Rs..... and Machine labor : Rs...../hour)

#### E. VALUE ADDITION AND VALUE CHAIN UPGRADATION

E.1	What activities (value capturing) do you perform on the produce before selling to the buyer and what is the cost of the value addition activities performed?		
	Activities	1= yes	2= No
E.1.i.	Cleaning		
E.1.ii	Storing/ Grading		
E.1.iii	Drying		
E.1.iv	Bagging/Packaging		
E.1.v	Storage		
E1.vi.	Transportation		
E.1.vii.	Labelling		
E.1.viii.	Weighting		
E.1.ix.	Other (specify)		
F2	Approximately, how much percentage of organic fresh products go to market unchanged and without any value addition.		
	i. Unchanged	ii. Value addition	

#### E.2. VALUE CHAIN UPGRADATION

E.2.1	Did you use any technology to produce output?	i. Yes				ii. No											
	If yes, in which activities?																
	Activities	Description															
E.2.1.i	Primary Production activities	i. Inputs (Seed and manures)		ii. Cutting		iii. Cleaning and Grading		iv. Post harvest treatment/storage		v. None		vi. Other (Specify).					
E.2.1.ii	Processing	i. Home based drying		ii. Small scale factory		iii. Large enterprises						iv. None		v. Other(Specify)			
E.2.1.iii.	Transport	i. Foot/Horse back/ Thela				ii. Motor bikes/ bicycles				iii. Cars/ Trucks.				iv. Other (Specify)			
E.2.1.iv.	Packaging/ labelling	i. Bulk (More than 20 kg)				ii. Bags		iii. Packs				iv. None of these				v. Other( Specify)	

<b>E.3.</b>	<b>What are various upgrading strategies implemented by the farmer?</b>	<b>i. Product Upgrading    ii. Process Upgrading</b> <b>iii. Functional Upgrading    iv. None of these</b>				
E.3.i.	Product Upgrading, If yes: in which form: ( 1 = Yes 2= No)					
E.3.i.a	Product type (Variety wise)					
E.3.i.b	Formulation (Quality aspect)					
E.3.i.c	Packaging					
E.3.ii.	Process Upgrading, If yes, in which form : ( 1 = Yes 2= No)					
E.3.ii.a	Field practises					
E.3.ii.b	Post Harvest					
E.3.ii.c	Standards					
E.3.ii.d	Logistics					
E.3.ii.e	Equipment					
E.3.ii.f	Marketing					
E.3.iii	Functional Upgrading, If yes, (in which form): ( 1 = Yes 2= No)					
E.3.iii.a	New activities absorbed					
E.3.iii.b	New market functions					
E.3.iii.c	New logistics function					
E.3.iii.d	New management functions					
E.3.iii.e	Outsourcing certain activities					
<b>E.6</b>	<b>What are the Source of technology knowledge?</b>	i. From generation to generation    ii. From neighbourhood    iii. Extension services (Government/NGO)    iv. Media (TV/Radio/Newspapers)    v. Formal education    vi. Other (Specify)				
<b>F</b>	<b>Rank the various constraints in upgrading the value chain production of organic crops</b>					
	<b>Factors</b>	<b>Ranks (1 to 11)</b>				
F.i.	Lack of market for organic produces					
F.ii.	Disease and Pest Control Mgt. (Herbicide).					
F.iii.	Low yield during conversion					
F.iv.	Inadequate quality standard					
F.v.	Involvement with farmers association/ organization					
F.vi.	No training facility					
F.vii.	Policy support					
F.viii.	High cost of input materials					
F.ix.	Lack of working capital					
F.x.	Consumer unwillingness to pay premium price					
F.xi.	Lack of marketing/ export channel					
<b>G.9</b>	<b>Rate the following as opportunities for upgrading the value chain for production of organic crops ( 1= Lowest 5= Highest)</b>					
	Opportunities	1	2	3	4	5
G.9.i.	Contract Farming					
G.9.ii	Promotion of input based enterprises					
G.9.iii	Agri-prenurs to provide market					

G.9.iv.	Direct marketing					
G.9.v.	Organic retail stores in various major cities					
G.9.vi.	Government support for certification and standards					
G.9.vii.	Develop extension services for production and processing					
G.9.viii.	Support for new technology development					
G.9.ix.	Establishment of internal quality management systems.					
G.9.x.	Improving market information					
G.9.xi.	Strengthen Producers Associations.					

## H. GOVERNANCE STRUCTURE

Relationship ,Linkage and Trust	
H1.i.	Do you have any contract with buyer?
H1.ii.	If yes, what is the type of contract
H1.iii.	Nature of Contract
H1.iii.a	Provisions of trading inputs
H1.iii.b	Provision of technical assistance
H1.iii.c	Provision of drying facility (Processing)
H1.iii.d	Provision of storage space and materials
H1.iii.e	Provision of transport
H1.iii.f	Provision of finance/ credit
H4	In your opinion, evaluate the extent of trust you have on various chain actors(1=Lowest 5=Highest)
	Chain actors:
H.4.i	Government officials
H.4.ii	Commission agents
H.4.iii	Retailers
H.4.iv	Wholesalers
H.4.v	FPC

## I. RULES AND REGULATION

I.i.	Do you adhere to any rules and regulation
I.ii.	If yes, who sets the rules
I.iii.	What are the form of rules
I.iv.	Formal rules, if yes which type
I.v.	Informal rules, if any
I.vi.	Who determines the price?

## J. SUPPORT SERVICES AND INFORMATION FLOW:

J.1.	Have you acquired any credit in the last 12 months?
------	---

J.2.	If yes, from which source	1= Government Subsidy 2= MFI 3=SHG 4=Money lenders 5= Banks 6= Farmers Association 7= NGO 8= Relatives 9= Other (Specify)					
J.3.	What Collateral was required?	1= None 2= Land Title 3= Livestock 4=Savings 5= Other (Specify)					
J.4.	If no, why was credit not acquired	1= Not required 2= Not available 3= Credit term 4= No collateral 5= Other (Specify)					
J.5.	Did you receive any market information?	1= Yes 2= No					
J.7	<b><i>What aspect of information did you receive? (1= Lowest;5= Highest), U= Unaware</i></b>						
	Market information type:	Sources	1	2	3	4	5
J.7.i	Organic crop prices						
J.7.ii	Market place information						
J.7.iii	Market price of inputs						
J.7.iv	Buyers information						
J.7.v	Location of input providers						
J.7.vi	Organic crop processing						
J.7.vii	Organic crop marketing						
J.7.viii	Technical training						
J.7.ix	Information about production						
J.7.x	Grading and delivery of products						
J.7.xi	Standard of organic production						
J.7.xii	Packaging and labelling						

## Annexure 2: Schedule (Traders)

**Title: Value Chain Analysis of Selected Organic Crops in Assam.**

Questionnaire No		Date of survey	
District		Crop	
Traders	i. Commission Agents	ii. Wholesaler	iii. Retailer

### A. House hold Information:

A1	Name	
A2	Age	
A3	Educational qualification	1. Illiterate 2. Primary 3. Secondary 4. Higher secondary 5. Degree and above
A4	Do you have separate marketing channel for organic crops	1. Yes 2. No
A5	Have you received any form of training on organic farming?	1. Yes 2. No
A6	If yes, who were the facilitators?	1. Extension Officers 2. NGO 3. Farmers Association 4. Other (Specify)

### B. Mapping the Value Chain.

#### B. PRODUCT FLOW

B1	In what form do you sell the products			i. Fresh green	ii. Processed		iii. Other	
B2	Do you separate the organic and conventional crops/ products for trading?			i. Yes	ii. No			
B3	Whom do you obtain your product from?			i. Farmer iv. Retailer	ii. Collector v. Others.	iii. Wholesaler		
B4	What proportion of quantity was purchased (in quintal)?							
	i. Below 10 quintal ii. 10 to 20 quintal iii. 20 to 30 quintal iv. More than 30 quintal							
B5	Actors	Farmers	Wholesale r	Collector	Retailers	FPC	Others	
B5 1	Buying informatio n							
B5 2	Buying Price							
B5 3	Place							
B5 4	Terms of payment							
Selling Information								
B6	Actors	i. Processo r	ii. FPC	Wholesaler s	Super marke t	Hotels & Restauran t	Expor t	Consume r

B6 2	Price							
B6 3	Terms of Payment i/Cash ii/ Credit							

**D : COMPUTATION OF COST:** Indicate the average cost incurred in trading process of organic crops.

D 1	Cost Component	Crop:
D1i	<b>Purchase price</b>	
D1ii	Assembling and Grading	
D1iii	Transportation Charges	
D1iv	Loading and Unloading Labor charges	
D1v	Storage Cost	
D1vi	Other Cost	
D1vii	Total Assembling Cost ( D1i toD1vi)	
D1viii	Losses (Losses in storage and damages of crops)	
D1ix	Total Cost (a)	
D1x	Selling Price (b)	
D1xi	Margin (a- b)	

#### **E . VALUE ADDITION AND VALUE CHAIN UPGRADATION**

E 1	What activities (value capturing) do you perform on the produce before selling to the buyer and what is the cost of the value addition activities performed?		
	Activities	1= yes	2= No
I	Cleaning		
li	Storing/ Grading		
lii	Drying		
lv	Bagging/Packaging		
V	Storage		
vi.	Transportation		
vii.	Labelling		
viii.	Weighting		
ix.	Other (specify)		
E 2	Approximately, how much percentage of vegetable go to market unchanged and with value addition.		
	i. Unchanged	ii. Value addition	

#### **Value Chain Upgradation**

F 1	Did you use any technology to process the organic crops?	i. Yes	ii. No
<b>F 8</b>	<b>What are the various constraints faced in upgrading the organic value chain (1-15)</b>		
	<b>Factors</b>	<b>Score (1-15)</b>	
1	Lack of market for organic produces		
2	Lack of efficient distribution system		
3	Lack of proper branding and labelling		
4	Costly/Inappropriate packaging material for organic products		

5	Lack of storage facility	
6	Consumer unwillingness to pay a premium price	
7	Inadequate and untimely supply of organic products	
8	Lack of awareness about organic products	
9	Buyer's trust issue in buying organic products	
10	Inadequate labelling of organic products	
11	Lack of marketing network to trade organic products	
12	Lack of government policy support	
13	Lack of value-added organic products	
14	Lack of infrastructure facilities to handle organic products (transportation, handling and grading)	
15	Lack of working capital	

#### **G . GOVERNANCE STRUCTURE**

	<b>Relationship ,Linkage and Trust</b>		
G 1.i.	Do you have any contract with buyer?	i. Yes	ii. No
G2.ii.	If yes, what is the type of contract	i. Verbal iv. Other (Specify)	ii. Written iii. Both

#### **H . RULES AND REGULATION**

H1.	Do you adhere to any rules and regulation	1. Yes	2. No
H1i	If yes, who sets the rules	i. Government officials   ii. Mutually among group actors   iii. FPC   iv. Other (Specify)	
H1ii.	What are the form of rules	i. Formal rules   ii. Informal rules	
H1iii.	Formal rules, if yes which type	i. Official legal standard   ii. Voluntary standard iii. Commercial requirement   iv. None of these	
H1iv.	Informal rules, if any		
H1v.	Who sets the purchase price	a. Negotiation   b. By the market   c. Self   d. Seller e. Other..... (Specify)	
H1vi.	If you decide on the purchasing price, how did you set it	a. Agreeing with other traders   b. Individually c. Other (Specify)	
	Who determines the price?	1. Buyers   2. Seller (You)   3. Other (Specify)	



**Annexure 3 : Structured schedule for comparative analysis of value chain of government and non-government sponsored organic farms.**

1. Year of Establishment:
2. Form of the organization:
3. Initiated and Founded by:
4. Market Catered: (i) Regional (ii) Regional and Other states (iii) Domestic and Exports.
5. Areas of Operations (Cities they operated):
6. Total Number of Members:
7. Please rank the following items (1= very poor, 2= poor, 3= average, 4= strong and 5= very strong) by applicability in your organization. Also kindly write a description (space provided) for your response.

	Parameters	1	2	3	4	5
<b>A</b>	<b>Technology</b>					
	A1. Technology adoption in the production and processing of value-added organic products.					
	A2. Technology adoption to upgrade the product type and quality aspect of the organic products.					
	A3. Technology adoption in the marketing of organic products.					
	A4. Technology adoption to build a strong and efficient network structure to link producers and consumers					
	A5. Technology adoption to communicate with chain actors					
Description:						
<b>B</b>	<b>Infrastructure</b>					
	B1. Adequate infrastructure available for supply of organic inputs, sowing of crops, and for post-harvest management.					
	B2. Adequate infrastructure for the production and processing of organic products.					
	B3. Adequate infrastructure for packaging, storage (cold storage), and transportation.					
	B4. Adequate infrastructure to market the organic products with proper labelling as per organic standards.					
	B5. Adequate infrastructure for support services (Credit services, advisory services)					
Description:						
<b>C</b>	<b>Customer Focus</b>					
	C1. Maintain speediness in the supply chain					
	C2. Maintain quality aspects as per the organic standards.					

	C3. Ensure the timely availability of organic products to consumers.					
	C4. Maintain comprehensibility in the labelling of organic products.					
	C5. The firm maintain a customer feedback system					
Description:						
<b>D.</b>	<b>Information</b>					
	D1. The firm ensure the free flow of information across chain actors					
	D2. Transparency is maintained at all levels of chain actors (Like using ERP, Using Block Chain technology)					
	D3. The firm ensure the traceability and tracking of organic products.					
	D4. The firm share information related to eco-labels and certification to consumers.					
	D5. The firms maintain timely information flow with regulatory bodies of organic agriculture.					
Description:						
<b>E</b>	<b>Diversified Products</b>					
	E1. The firm produce a variety of value-added organic products.					
	E2. The firm engage in organic input business					
	E3. The firm provide training and consultation services to various interested groups.					
	E4. The firm involved in B2B business.					
	E5. The firm involved in the export activity.					
Description:						
<b>F</b>	<b>Awareness and Knowledge</b>					
	F1. The farmers aware and knowledgeable about organic farming standards.					
	F2. The firm is aware and have knowledge about organic certification system for fresh and value-added organic products.					
	F3. Knowledge about export mechanism					
	F4. Knowledge about upgrading technology like (ERP, Block chain technology)					
	F5. Awareness and knowledge about global organic food market					
Description:						
<b>G</b>	<b>Capacity building</b>					
	G1 Firm has collaboration/ interaction with research					

	institutes/ academic institutes.					
	G2 The firm regularly conducts training and extension activities to share knowledge among farmers.					
	G3 The firm collaboration with NGOs/ Government / Private organization.					
	G4 The firm has structured vertical and hierarchical coordination.					
	G5 Good governance structure and related policies are in place at all level.					
Description:						
<b>H</b>	<b>Competitive advantage</b>					
	H1 Firm has the quality advantage for its products.					
	H2 Firm has a cost advantage in cultivation, production, and distribution.					
	H3 The firm has strong customer support and service.					
	H4 The firm has a strong distribution network.					
	H5 The firm has vast new market opportunities.					
Description:						
<b>I</b>	<b>Pricing</b>					
	I1. The firm have an assured market linkage to have premium prices for organic products.					
	I2. The firm has a high product margin due to value-added organic products.					
	I3. The price of the product is determined by demand-supply forces in the market.					
	I4. The firm share profits/ surplus to its linked farmers.					
	I5. The firm able to fetch premium prices for organic produce.					
Description:						
<b>J</b>	<b>Logistic drivers</b>					
	J1. The farmers have adequate transportation facilities as per organic standards.					
	J2. The firm have proper input procurement and handling division.					
	J3. The firm have an inventory management system for finished products.					
	J4. The firm have adequate selling points to distribute the products to end consumer.					
	J5. The firm have an order processing system to take orders from consumers.					
Descriptive:						

## Annexure 4: Content Validity

Experts were requested to assess the degree of relevance of each item to be measured in the domain on a four-point scale, with a caveat that they should be as objective and constructive as possible in their review. The degree of relevance is as under:

- 1- The item is not relevant to the measured domain
- 2- The item is somewhat relevant to the measured domain
- 3- The item is quite relevant to the measured domain
- 4- The item is highly relevant to the measured domain

Once ratings are collated by the researcher, the following process is followed:

- a) Ratings obtained are further coded as 0 and 1. Responses of 1 and 2 are coded into 0 and responses of 3 and 4 are coded into 1.
- b) Relevant rating provided by all the experts are totaled for each item to see how many experts are in agreement with the questions.
- c) The total number of experts who agreed with a question are then divided by the total number of experts. This gives us the ICVI score for each question.

1. The relevance rating of the item by eight experts for constraints faced by farmers and the results are shown as under:

Relevance ratings of the item by eight experts for constraints faced by farmers.

Sl	Items	Expert1	2	3	4	5	6	7	8	Experts in agreements	I-CVI
1	Lack of market for organic produces	1	1	1	1	1	1	1	1	8	1
2	High cost of labor	0	0	1	1	1	1	0	1	5	0.625
3	Low yield during conversion	1	0	1	1	1	1	1	1	7	0.875
4	Inadequate quality standard	0	1	1	1	1	1	1	1	7	0.875
5	Inadequate supply of organic inputs	0	0	1	1	1	1	1	1	6	0.75
6	Seasonality of organic crops	0	0	1	1	1	1	1	0	5	0.625
7	Policy support	1	1	1	1	1	1	1	1	8	1
8	High cost of inputs materials	0	1	1	1	1	1	1	1	7	0.875
9	Lack of working capital	1	0	1	1	1	1	1	1	7	0.875
10	Consumer unwillingness to pay premium price	1	0	1	1	1	1	1	1	7	0.875
11	Lack of transportation	0	0	1	1	1	0	0	1	4	0.5

For content validation, the minimum acceptable expert member is two, however, most of the recommendation proposes a minimum of six experts. The study by () recommends that the number of experts of content validation should be at least six and not exceed ten. Based on this recommendation, the present study considers eight experts.

The acceptable cut of score of I-CVI should be at least 0.83 with six to eight members. Considering this, the cut of score of four questions namely the high cost of labor, inadequate supply of organic inputs, policy support and lack of transportation is found to be below 0.83 and as per the comments/ suggestions from experts, these questions are changed and again sent to expert for validation.

### 1.a. Second Round of Content Validation (Constraints faced by farmers)

Sl	Items	Expert1	2	3	4	5	6	7	8	Experts in agreements	I-CVI
1	Lack of market for organic produces	1	1	1	1	1	1	1	1	8	1
2	Disease and pest control mgt.	1	0	1	1	1	1	1	1	7	0.875
3	Low yield during conversion	1	0	1	1	1	1	1	1	7	0.875
4	Inadequate quality standard	0	1	1	1	1	1	1	1	7	0.875
5	Involvement with farmers associations/organizations are not encouraging	1	0	1	1	1	1	1	1	7	0.875
6	No training facilities	1	0	1	1	1	1	1	1	7	0.875
7	Policy support	1	1	1	1	1	1	1	1	8	1
8	High cost of inputs materials]	1	1	1	1	1	1	1	1	8	1
9	Lack of working capital	1	0	1	1	1	1	1	1	7	0.875
10	Consumer unwillingness to pay premium price	1	0	1	1	1	1	1	1	7	0.875
11	Lack of marketing/export channel	1	0	1	1	1	1	1	1	7	0.875

*All the items of constraints faced by farmers in value chain meet the acceptable I-CVI score which is 0.83.*

### 2. Constraints faced by the traders.

The relevance rating of the item by eight experts for constraints faced by the traders

Sl	Items	Expert1	2	3	4	5	6	7	8	Experts in agreements	I-CVI
1	Lack of market for organic produces	1	1	1	1	1	1	0	1	7	0.875
2	Certification issue	1	0	1	1	1	1	1	1	7	0.875
3	Compliance with organic standards	1	0	1	1	1	1	1	1	7	0.875
4	Costly packaging material for organic products	1	0	1	1	1	1	1	1	7	0.875
5	Lack of storage facility	1	1	1	1	1	1	1	1	8	1
6	Consumer unwillingness to pay a premium price	1	0	1	1	1	1	1	1	7	0.875
7	Inadequate and untimely supply of organic products	1	0	1	1	1	1	1	1	7	0.875
8	Lack of awareness about organic products	1	0	1	1	1	1	1	1	7	0.875
9	Buyer's trust issue in buying organic products	1	1	1	1	1	1	1	1	8	1
10	Inadequate labelling of organic products	1	0	1	1	1	1	1	1	7	0.875
11	Lack of marketing network to trade organic products	1	1	1	1	1	1	1	1	8	1
12	Lack of government support	1	0	1	1	1	1	1	1	7	0.875
13	Lack of value-added organic products	1	0	1	1	1	1	1	1	7	0.875
14	Lack of infrastructure facilities to handle organic products	1	1	1	1	1	1	1	1	8	1

	(transportation, handling, and grading)										
15	Lack of working capital	1	1	1	1	1	1	1	1	8	1

*All the items of constraints faced by traders in value chain meet the acceptable I-CVI score which is 0.83.*

### 3. Opportunities in the upgrading of value chain.

The relevance rating of the item by eight experts for opportunities in the upgrading of value chain.

Sl	Items	Expert1	2	3	4	5	6	7	8	Experts in agreements	I-CVI
1	Contract Farming	1	1	1	1	1	0	1	1	7	0.875
2	Promotion of input -based enterprises	1	1	1	1	1	1	1	1	8	1
3	Agri-pruners to provide market	1	1	1	1	1	1	0	1	7	0.875
4	Direct marketing	1	1	1	1	1	1	1	0	7	0.875
5	Organic retail stores in various major cities	1	1	1	1	1	1	1	1	8	1
6	Govt support for certification and standards	1	1	1	1	1	1	1	1	8	1
7	Develop extension services for production and processing	1	1	1	0	1	1	1	1	7	0.875
8	Support for new technology development	1	1	1	1	1	1	1	1	8	1
9	Establishment of internal quality management system	1	1	1	0	1	1	1	1	7	0.875
10	Improving market information	1	1	1	1	1	1	0	1	7	0.875
11	Strengthen Producers Association	1	1	1	1	1	1	1	1	8	1

*All the items of opportunities in the upgrading of the value chain in value chain meet the acceptable I-CVI score which is 0.83.*

### 4. Governance Structure of the Chain

The relevance rating of the item by eight experts for governance structure of the value chain.

#### Content Validation (Governance Structure of the chain)

Sl	Items	Expert1	2	3	4	5	6	7	8	Experts in agreements	I-CVI
1	Types of contracts in the chain	1	1	1	1	1	1	1	1	8	1
2	Nature of contracts	1	1	0	1	1	1	1	1	7	0.875
3	Rules and regulations	1	1	1	0	1	1	1	1	7	0.875
4	Governance structure follows by the farmers	1	1	1	1	1	1	1	1	8	1
5	How selling price is determined	1	1	1	1	1	1	1	1	8	1
6	Extent of trust farmers have on various chain actors	1	1	0	1	1	1	1	1	7	0.875
7	Information flow	1	1	0	1	1	1	1	1	7	0.875

*All the items for governance structure of the value chain in value chain meet the acceptable I-CVI score which is 0.83.*

**Annexure 5 : Garrett's Table**

<b>Percentage</b>	<b>Score</b>	<b>Percentage</b>	<b>Score</b>	<b>Percentage</b>	<b>Score</b>
0.09	99	20.93	66	80.61	33
0.20	98	22.32	65	81.99	32
0.32	97	23.88	64	83.31	31
0.45	96	25.48	63	84.56	30
0.61	95	27.15	62	85.75	29
0.78	94	28.86	61	86.89	28
0.97	93	30.61	60	87.96	27
1.18	92	32.42	59	88.97	26
1.42	91	34.25	58	89.94	25
1.68	90	36.15	57	90.83	24
1.96	89	38.06	56	91.67	23
2.28	88	40.01	55	92.45	22
2.63	87	41.97	54	93.19	21
3.01	86	43.97	53	93.86	20
3.43	85	45.97	52	94.49	19
3.89	84	47.98	51	95.08	18
4.38	83	50	50	95.62	17
4.92	82	52.02	49	96.11	16
5.51	81	54.03	48	96.57	15
6.14	80	56.03	47	96.99	14
6.81	79	58.03	46	97.37	13
7.55	78	59.99	45	98.72	12
8.33	77	61.94	44	98.04	11
9.17	76	63.85	43	98.32	10
10.16	75	65.75	42	98.58	9
11.03	74	67.48	41	99.82	8
12.04	73	69.39	40	99.30	7
13.11	72	71.14	39	99.22	6
14.25	71	72.85	38	99.39	5
15.44	70	74.52	37	99.55	4
18.69	69	76.12	36	99.68	3
18.01	68	77.68	35	99.80	2
19.39	67	79.12	34	99.91	1
				100	0

E.Garrett's statistics in Psychology and Education, Feffer and Simans Private Limited, 21969, p.329.

**Annexure 6: List of district under MOVCD with Area and Production of ginger and turmeric for the year 2015-2016.**

Sl. No.	District Name	Ginger		Turmeric	
		Area (hect.)	Production (tonnes)	Area (hect.)	Production (tonnes)
<b>1</b>	<b>Dhemaji</b>	500	4390	377	300
<b>2</b>	<b>Majuli</b>	-	-	-	-
<b>3</b>	<b>Golaghat</b>	<b>951</b>	<b>8535</b>	<b>1359</b>	<b>2106</b>
<b>4</b>	<b>Kamrup</b>	482	3704	609	697
<b>5</b>	<b>Sonitpur</b>	<b>612</b>	<b>5945</b>	<b>1153</b>	<b>1125</b>
<b>6</b>	<b>Nalbari</b>	382	3052	375	368
<b>7</b>	<b>Kokrajhar</b>	417	3159	677	610
<b>8</b>	<b>Chirang</b>	440	2218	500	345
<b>9</b>	<b>Cachar</b>	223	1592	341	728

Source: [www.des.assam.gov.in](http://www.des.assam.gov.in), 2017



## **Annexure 7 : List of Publications**

### **1. Publications:**

#### **a. Journals (Total: 5)**

( *Scopus, Web of Science, ABDC indexed= 4*).

1. Das, N.K., Roy A., and Srivastava, S. 2023. "Exploring the value chain of organic pineapple of Assam, India", *Supply Chain Management: An International Journal*, vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/SCM-10-2022-0411>. Emerald Publishing. Scopus, Web of Science, and ABDC (B category) indexed. Impact factor: 10.9 (2022).
2. Das. N.K and Roy A. 2023. "Systematic mapping study of literature in organic food value chain (1990–2021)", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JADEE-01-2023-0022>. Emerald Publishing. Scopus, Web of Science, and ABDC (C category) indexed. Impact factor: 3.50 (2022).
3. Das, N.K. and Roy A. 2021. COVID-19 and agri-food value chain: a systematic review and bibliometric mapping. *Journal of Agribusiness in Developing and Emerging*. Vol. 12, No. 3, pp. 442-462. Doi: <https://doi.org/10.1108/JADEE-07-2021-0188e>. Emerald Publishing. Scopus and ABDC (C category) indexed. Impact factor: 3.50(2022).
4. Das, N.K. and Roy A. 2021. Value chain analysis of organic pumpkin in India. *Organic Agriculture*. Vol 11. Pp. (659-674). Doi: <https://doi.org/10.1007/s13165-021-00374-y>. Springer Nature publisher, Scopus Indexed. Cite score: 4.80 (2023).

#### **UGC care List I (1)**

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#### **b. Book Chapters (2)**

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