Action Plan 26
Increase locally produced halal food in the world market

Halal Food Hub

Main Objective:
Develop a halal brand for Malaysia.

Approach

The said appointed agency/department should encourage food producers to:

- **comply with the Guidelines on Foods, Drinks and Goods Utilised by Muslims for production of all non-haram food**
- **apply halal label on all their products**

Recommended:
Give tax incentives to food producers who have obtained halal certification.

Action Plan 27
Develop strategies for making Malaysia as the hub for world halal food

Halal Food Hub

Main Objective:
Turn Malaysia as the hub for world halal food.

Approach

Should the findings from the proposed study on international halal food market behaviour indicate that it would be economically beneficial for Malaysia to be hub for world halal food, then we proposed the relevant government agency:

1. **Engage more resources in branding Malaysia as a Halal food producer**

2. **Encourage all non-haram food producers to obtain halal certification**

3. **Allocate land for the halal hub**

4. **Develop world-class infrastructure equivalent to MSC, which incorporates GMP and HACCP standards**

The chart below shows the link between the proposed strategies and action plans and the challenges, opportunities and threats identified in the study:

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
PRODUCTION			
• Malaysia is relatively a high cost food producer	• Focus on niche market, i.e value-added and halal chilled and frozen food products	• 17	• Product Marketing Strategy
	• Increase production capacity • Raw materials management - vegetables	• 8 • 9	• Product Marketing Strategy • Increase Productions
• High cost of imported equipment	[illegible]	• 6 • 5	• Production Support Strategy • Cold Chain Development Strategy
• [illegible]	[illegible]	• 5 • 5 • 5	[illegible]
TECHNOLOGY and R&D			
• Little R&D on local c&f food	• Undertake R&D for popular local food • [illegible] • [illegible] • Promote "contract R&D" for product in specific target market between [illegible] • Establish a sub-section within the current R&D centres focusing on [illegible] c&f food	• 10 • 10 • 10 • 10 • 10	• Increase Production and Products Varieties Strategy
• Lack of suitable equipment for production of c&f local food	• Undertake R&D for popular local food • Making government fund/incentives more accessible • Provide incentives to private companies to carry R&D either [illegible] • Promote "contract R&D" for [illegible] local or foreign research houses/companies	• 10 • 10 • 10 • 10	• Increase Production and Products Varieties Strategy

The chart below shows the link between the proposed strategies and action plans and the challenges, opportunities and threats identified in the study:

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
PRODUCTION			
Malaysia is relatively a high cost food producer	•Focus on niche market, i.e value-added and halal chilled and frozen food products	•17	• Product Marketing Strategy
	•Increase production capacity	•8	• Product Marketing Strategy
	•Raw materials management - vegetables	•9	•Increase Productions
High cost of imported equipment	•Reduce import duties in the short run	•6	• Production Support Strategy
	•Improve quality of local fabricated machines	•5	• Cold Chain Development Strategy
Inferior performance of locally fabricated machinery as compared to imported ones	•Regulate materials specifications for constructing/fabricating machines	•5	• Cold Chain Development Strategy
	•Obtain approval for design of refrigeration equipment	•5	
	•Ensure all locally fabricated machines are comparable with imported machines	•5	
TECHNOLOGY and R&D			
Little R&D on local c&f food	•Undertake R&D for popular local food	•10	• Increase Production and Products Varieties Strategy
	•Making government fund/incentives more accessible	•10	
	•Provide incentives to private companies to carry R&D either individually or with public sector	•10	
	•Promote "contract R&D" for products in specific target market between public sector and local or foreign research house/companies	•10	
	•Establish a sub-section within the current R&D centres focusing on ethnic c&f food	•10	
Lack of suitable equipment for production of c&f local food	•Undertake R&D for popular local food	•10	• Increase Production and Products Varieties Strategy
	•Making government fund/incentives more accessible	•10	
	•Provide incentives to private companies to carry R&D either individually or with public sector	•10	
	•Promote "contract R&D" for process/technology for developing food demanded in specific target market between public sector and local or foreign research house/companies	•10	

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
CONSUMER			
• Poor perception of frozen food • Lack of awareness on handling and on quality	• Educate public on the value of c&f food- fresh alternative • Educate public on food safety and proper handling of c&f food • Ensure high product quality	•16 •16 •12	• Product Marketing Strategy • Increase Production and Products Varieties Strategy
COLD CHAIN			
• Poor handling practice	• Training on proper handling of c&f food • Encourage implementation of GHP, GMP, HACCP • Enforce current legislations: Food Act 1983 and Food Regulation 1985 & Proposed Draft Food Hygiene Regulation (once approved) • Introduce and mandate the practice of temperature monitoring system • Ensure all c&f food producers implement GHP, GMP	•1 •2 •3 •4 •2	• Cold Chain Development Strategy
• Improper design & quality of materials used in chiller/freezer	• Regulate materials specifications for constructing/fabricating machines • Obtain approval for design of refrigeration equipment • Ensure all locally fabricated machines are comparable with imported machines	•5 •5 •5	• Cold Chain Development Strategy
• Lack of cold truck network outside the Klang Valley	• Provide incentives for logistics operators to expand their services to selected areas outside the Klang Valley	•7	• Cold Chain Development Strategy
HUMAN RESOURCES DEVELOPMENT			
• Shortage of frontline workers	• Allow recruitment of foreign workers • Upgrade production technology [illegible]	•19 •20	• Human Resource Development Strategy
• [illegible] industry	[illegible]	•2 •21 •22 •2	[illegible]

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
CONSUMER			
Poor perception of frozen food	•Educate public on the value of c&f food- fresh alternative	•16	• Product Marketing Strategy
Lack of awareness on handling and on quality	•Educate public on food safety and proper handling of c&f food	•16	•Increase Production and Products Varieties Strategy
	•Ensure high product quality	•12	
COLD CHAIN			
Poor handling practice	• Training on proper handling of c&f food	•1	•Cold Chain Development Strategy
	•Encourage implementation of GHP, GMP, HACCP	•2	
	•Enforce current legislations: Food Act 1983 and Food Regulation 1985 & Proposed Draft Food Hygiene Regulation (once approved)	•3	
	•Introduce and mandate the practice of temperature monitoring system	•4	
	•Ensure all c&f food producers implement GHP, GMP	•2	
Improper design & quality of materials used in chiller/freezer	•Regulate materials specifications for constructing/fabricating machines	•5	•Cold Chain Development Strategy
	•Obtain approval for design of refrigeration equipment	•5	
	•Ensure all locally fabricated machines are comparable with imported machines	•5	
Lack of cold truck network outside the Klang Valley	•Provide incentives for logistics companies to expand their services to selected areas outside the Klang Valley.	•7	•Cold Chain Development Strategy
HUMAN RESOURCES DEVELOPMENT			
Shortage of frontline workers	•Allow recruitment of foreign workers	•19	•Human Resource Development Strategy
	•Upgrade production technology – encourage automation	•20	
Producers /Manufacturers lack knowledge in food standard and the technical know-how covering this industry	•Educate management on implementing GHP, GMP, HACCP	•2	•Cold Chain Development Strategy
	•Educate & train for management on Good Management Practice	•21	•Human Resource Development Strategy
	•Proposed Chilled and Frozen Food Association to be information resource centre.	•22	•Industry Linkage Strategy
	•Ensure all c&f food producers implement GHP or GMP – mandate GHP and GMP implementation	•2	

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
OPPORTUNITIES			
Increasing urbanisation rate and demand for convenient food	•Undertake R&D for local food	•10	•Increase Size of Players and Products Varieties Strategy
	•Educate public on the value of c&f food – fresh alternative	•16	• Product Marketing Strategy
	•Promote local c&f food aggressively	•17	
	•Increase production	•8	
	•Increase products varieties of c&f food	•11	
·High potential areas i.e. ready meals, snack and meat-based and seafood-based products, and minimally processed vegetable as they are in the infancy stage with only a few small producers and limited product varieties	•Identify popular local food and imported c&f food	•17	• Product Marketing Strategy
	•Promote local production of c&f food to foodservice providers	•17	•Increase Size and Products Varieties Strategy
	•Encourage investment in minimally processed vegetables	•15	•Development of Food service Sector Strategy
	•Increase production	•8	
	•Increase products varieties, e.g popular c&f food	•11	
	•Penetrate overseas markets with locally product c&f food including those with meat-based products	•17	
· Popularity of the central kitchen operations	•Promote the establishment of central kitchen	•13	•Development of Food service Sector
	•Upgrade SMIs in c&f food to become suppliers to central kitchen operators	•14	
LEGISLATION & INSTITUTIONAL			
·Difficulties in meeting international food standards and foreign big customer's requirements	•Expose management on implementing GHP, GMP, HACCP	•2	•Cold Chain Development Strategy
	•Provide incentives for companies to implement GHP, GMP, HACCP and ISO	•2	•Product Marketing
	•Enforce current Food Act and Food Regulation	•3	
	•Government to assist c&f [illegible]	•3	
	[illegible]	•17	
	[illegible]	•3	
	[illegible]	•22	
·Industry players are not organised	[illegible]	•22	Industry Linkages Strategy
[illegible]	[illegible]	•22	
	[illegible]	•22	
	[illegible]	•22	

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
OPPORTUNITIES			
Increasing urbanisation rate and demand for convenient food	•Undertake R&D for local food •Educate public on the value of c&f food – fresh alternative •Promote local c&f food aggressively •Increase production •Increase products varieties of c&f food	•10 •16 •17 •8 •11	•Increase Size of Players and Products Varieties Strategy • Product Marketing Strategy
High potential areas i.e. ready meals, snack and meat-based and seafood-based products, and minimally processed vegetable as they are in the infancy stage with only a few small producers and limited product varieties	•Identify popular local food and imported c&f food •Promote local production of c&f food to foodservice providers •Encourage investment in minimally processed vegetables •Increase production •Increase products varieties, e.g popular c&f food •Penetrate overseas markets with locally product c&f food including those with meat-based products	•17 •17 •15 •8 •11 •17	• Product Marketing Strategy •Increase Size and Products Varieties Strategy •Development of Food service Sector Strategy
Popularity of the central kitchen operations	•Promote the establishment of central kitchen •Upgrade SMIs in c&f food to become suppliers to central kitchen operators	•13 •14	•Development of Food service Sector
LEGISLATION & INSTITUTIONAL			
Difficulties in meeting international food standards and foreign big customer's requirements	•Expose management on implementing GHP, GMP, HACCP •Provide incentives for companies to implement GHP, GMP, HACCP and ISO •Enforce current Food Act and Food Regulation •Government to assist c&f meat/meat-based food producers to export their products by negotiating with countries that imposing ban on same. •Promote locally produced c&f food aggressively •Enforce Proposed Draft Food Hygiene Regulation (once approved) •Initiate self regulatory system	•2 •2 •3 •3 •17 •3 •22	•Cold Chain Development Strategy •Product Marketing
Industry players are not organized Inefficient information flow – missing link – between industry and government agencies	•Set up a Chilled and Frozen Food Association •Facilitate information flow within the industry and government •Transform Chilled and Frozen Food Association into a non-governmental regulatory and marketing body for the industry. •Develop trade associations for other supporting industry in the chilled and frozen food industry	•22 •22 •22 •22	•Industry Linkages Strategy

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
THREATS			
Globalisation.	•Cost efficient •Increase products varieties •Ensure high product quality •Promote locally produced c&f food aggressively – to local & overseas •Introduce & promote quality recognition logo for c&f food •Encourage all potential food exporters to implement HACCP •Encourage all non-haram food to have Halal certification	•8 •11 •12 •17 •17 •2 •26	•Increase Size and Products Varieties •Halal Food Hub Strategy •Cold Chain Development Strategy..
Competition from non C&F Food	•Educate public on the value of c&f food- fresh alternative •Ensure high product quality •Increase product varieties •Promote locally produced c&f food aggressively	•16 •12 •11 •17	• Product Marketing Strategy •Increase Size of Players and Product Varieties Strategy
HALAL FOOD HUB	[illegible]	•23 •24 •24 •25 •25 •26 •25 •24 •27 •27 •27 •27	
No clear vision			•Halal Food Hub
Activities are not well-coordinated and lack of concrete action plans			

MAJOR CHALLENGES, THREATS AND OPPORTUNITIES	ACTION PLANS		STRATEGY
THREATS			
Globalisation	•Cost efficient	•8	•Increase Size and Products Varieties
	•Increase products varieties	•11	
	•Ensure high product quality	•12	
	•Promote locally produced c&f food aggressively -- to local & overseas	•17	•Halal Food Hub Strategy
	•Introduce & promote quality recognition logo for c&f food	•17	•Cold Chain Development Strategy..
	•Encourage all potential food exporters to implement HACCP	•2	
	•Encourage all non-haram food to have Halal certification	•26	
Competition from non C&F Food	•Educate public on the value of c&f food- fresh alternative	•16	• Product Marketing Strategy
	•Ensure high product quality	•12	•Increase Size of Players and Product Varieties Strategy
	•Increase product varieties	•11	
	•Promote locally produced c&f food aggressively	•17	
HALAL FOOD HUB	•Further understand global market demand for halal food- Halal Food Study	•23	
	•Appoint an agency/department to spearhead the halal food strategies and carry out immediate promotional activities such as :	•24	
	•Develop and promote an internationally recognised Malaysia Halal trademark	•24	
	•Invest in brand building for positioning Malaysia as a Halal food producer	•25	
	•Encourage food MNC to set up halal food production centre in Malaysia	•25	
No clear vision	•Encourage c&f food producers for non-haram food to comply with the procedures of halal food production and apply halal label for the same.	•26	•Halal Food Hub
Activities are not well coordinated and lack of concrete action plans	•Motivate other neighbouring countries to use Malaysia as a transit point for halal food	•25	
	•Improve coordination and identify responsibilities of government agencies in making Malaysia a halal food hub	•24	
	Should findings from the Study indicate lucrative economic benefits to turn Malaysia as a hub for world halal food from production point, then;		
	•Invest heavily in brand building to position Malaysia as a Halal food producer	•27	
	•Allocate land for halal food hub	•27	
	•Encourage local c&f food producers to obtain halal certification	•27	
	•Develop world class infrastructure equivalent to MSC, which incorporate GMP and HACCP standards	•27	

9.4 Implementation Timeframe For Action Plans

As the strategies and action plans proposed are for a period of 10 years, below is the recommended implementation timeframe. The timeframe for action plans are immediate to two years time, and long-term would refers to 3 to 10 years.

The diagram below links the challenges, opportunities and threats identified to short term and long term action plans.

(Please refer to the following pages) :

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
PRODUCTION				
Malaysia is relatively a high cost food producer	•Focus on niche market, i.e value-added and halal chilled and frozen food products	•18	•Focus on niche market, i.e value-added and halal chilled and frozen food products	•18
			•Increase production capacity •Raw Material Management	•8 •9
High cost of imported equipment	•Reduce import duties in the short run	•6	•Improve quality of local fabricated machines	•5
[illegible]	[illegible]	•5 •5	[illegible]	•5 •5
			[illegible]	•5
TECHNOLOGY and R&D				
Little R&D on local c&f food	•Undertake R&D for popular local food •Make government fund/incentives more accessible •Provide incentives to private companies to carry R&D either individually or with public sector	•10 •10 •10	•Undertake R&D for popular local food •Make government fund/incentives more accessible •Provide incentives to private companies to carry R&D either individually or with public sector	•10 •10 •10
			•Promote "contract R&D" for products in specific target market between public sector and local or foreign research house/companies •Establish a sub-section within the current R&D centres focusing on ethnic c&f food	•10 •10
[illegible]	[illegible]	•10	[illegible]	•10
			[illegible]	•10

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
PRODUCTION				
Malaysia is relatively a high cost food producer	•Focus on niche market, i.e value-added and halal chilled and frozen food products	•18	•Focus on niche market, i.e value-added and halal chilled and frozen food products	•18
			•Increase production capacity	•8
			•Raw Material Management	•9
High cost of imported equipment	•Reduce import duties in the short run	•6	•Improve quality of local fabricated machines	•5
Inferior performance of locally fabricated machinery as compared to imported ones	•Regulate the materials specifications for constructing/fabricating machines	•5	•Regulate the material specifications for constructing/fabricating machines	•5
	•Obtain approval for design of refrigeration equipment	•5	•Obtain approval for design of refrigeration equipment	•5
			•Ensure all locally fabricated machines are comparable with imported machines	•5
TECHNOLOGY and R&D				
Little R&D on local c&f food	•Undertake R&D for popular local food	•10	•Undertake R&D for popular local food	•10
	•Make government fund/incentives more accessible	•10	•Make government fund/incentives more accessible	•10
	•Provide incentives to private companies to carry R&D either individually or with public sector	•10	•Provide incentives to private companies to carry R&D either individually or with public sector	•10
			•Promote "contract R&D" for products in specific target market between public sector and local or foreign research house/companies	•10
			•Establish a sub-section within the current R&D centres focusing on ethnic c&f food.	•10
Lack of suitable equipment for production of c&f local food	•Undertake R&D for popular local food •Make government fund/incentives more accessible •Provide incentives to private companies to carry R&D either individually or with public sector	•10	•Undertake R&D for popular local food •Make government fund/incentives more accessible •Provide incentives to private companies to carry R&D either individually or with public sector	•10
			•Promote "contract R&D" for process/technology for developing food demanded in specific target market between public sector and local or foreign research house/companies	•10

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
CONSUMER				
· Poor perception of frozen food	•Educate public on the value of c&f food - fresh alternative	•16	•Educate public on the value of c&f food - fresh alternative	•16
· Lack of awareness on handling and on quality	•Educate public on food safety and proper handling of c&f food	•16	•Educate public on food safety and proper handling of c&f food	•16
			•Ensure high product quality	•12
COLD CHAIN				
· Poor handling practice	•Train on proper handling of c&f food	•1	•Introduce and mandate the practice of temperature monitoring system	•4
	•Encourage implementation of GHP, GMP, HACCP	•2	•Ensure all c&f food producer implement GHP, GMP	•2
	•Enforce current legislations: Food Act 1983 and Food Regulation 1985 & Proposed Draft Food Hygiene Regulation (once approved)	•3		
· [illegible] design & quality of [illegible] chiller/freezer	•Regulate the material specifications for constructing/fabricating machines	•5	•Regulate the materials specifications for constructing/fabricating machines	•5
	•Obtain approval for design of refrigeration equipment	•5	•Obtain approval for design of refrigeration equipment	
			•Ensure all locally fabricated machines are comparable with imported ones	•5
· [illegible]	•Provide incentives for logistic companies to expand their services to selected areas outside the Klang Valley	•7		

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
CONSUMER				
Poor perception of frozen food Lack of awareness on handling and on quality	•Educate public on the value of c&f food - fresh alternative •Educate public on food safety and proper handling of c&f food	•16 •16	•Educate public on the value of c&f food - fresh alternative •Educate public on food safety and proper handling of c&f food	•16 •16
COLD CHAIN			•Ensure high product quality	•12
Poor handling practice	• Train on proper handling of c&f food •Encourage implementation of GHP, GMP, HACCP •Enforce current legislations: Food Act 1983 and Food Regulation 1985 & Proposed Draft Food Hygiene Regulation (once approved)	•1 •2 •3	•Introduce and mandate the practice of temperature monitoring system •Ensure all c&f food producer implement GHP, GMP,	•4 •2
Improper design & quality of materials used in chiller/freezer	•Regulate the material specifications for constructing/fabricating machines •Obtain approval for design of refrigeration equipment	•5 •5	•Regulate the materials specifications for constructing/fabricating machines •Obtain approval for design of refrigeration equipment	•5
			•Ensure all locally fabricated machines are comparable with imported ones	•5
Lack of cold truck network outside the Klang Valley	•Provide incentive for logistic companies to expand their services to selected areas outside the Klang Valley.	•7		

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
LEGISLATION & INSTITUTIONAL				
• Difficulties in meeting international food standards and foreign big customer's requirements	-Expose management on implementing GHP, GMP, HACCP -Provide incentives for companies to implement GHP, GMP, HACCP and ISO -Enforce current Food Act and Food Regulation -Government to assist c&f meat/meat-based food producers to export their products by negotiating with countries that imposing ban on same. -Promote of locally produced c&f food internationally	•2 •2 •3 •3 •17	-Expose management on implementing GHP, GMP, HACCP -Provide incentives for companies to implement GHP, GMP, HACCP and ISO -Enforce current Food Act and Food Regulation -Government to assist c&f meat/meat-based food producers to export their products by negotiating with countries imposing ban on same. -International promotion of locally produced c&f food	•2 •2 •3 •3 •17
			-Enforce Proposed Draft Food Hygiene Regulation (once approved) -Initiate self regulatory system	•3 •22
• [illegible] are not organized • [illegible] information flow – missing link between industry and government agencies	-Set-up a Chilled and Frozen Food Association	•22	-Facilitate information flow within the industry and government -Transform Chilled and Frozen Food Association into a non-governmental regulatory and marketing body for the industry -Develop trade associations for other supporting industry in the chilled and frozen food industry	•22 •22 •22
HUMAN RESOURCES DEVELOPMENT				
• [illegible]	-Allow recruitment of foreign workers	•19	-Upgrade production technology – encourage automation	•20
• [illegible]	[illegible]	•2 •21 •22	[illegible] on implementing GHP [illegible] [illegible] management on Good [illegible] [illegible] Frozen Food Association to [illegible] centre	•2 •21 •22
			[illegible] food producers implement GHP or [illegible] GHP and GMP implementation	•2

Difficulties in meeting international food standards and foreign big customer's requirements	•Expose management on implementing GHP, GMP, HACCP	•2	•Expose management on implementing GHP, GMP, HACCP	•2
	•Provide incentives for companies to implement GHP, GMP, HACCP and ISO	•2	•Provide incentives for companies to implement GHP, GMP, HACCP and ISO	•2
	•Enforce current Food Act and Food Regulation	•3	•Enforce current Food Act and Food Regulation	•3
	•Government to assist c&f meat/meat-based food producers to export their products by negotiating with countries that imposing ban on same.	•3	•Government to assist c&f meat/meat-based food producers to export their products by negotiating with countries imposing ban on same.	•3
	•Promote of locally produced c&f food internationally	•17	•International promotion of locally produced c&f food	•17
			•Enforce Proposed Draft Food Hygiene Regulation (once approved)	•3
			•Initiate self regulatory system	•22
Industry players are not organized	•Set - up a Chilled and Frozen Food Association	•22	•Facilitate information flow within the industry and government	•22
Inefficient information flow – missing link – between industry and government agencies			•Transform Chilled and Frozen Food Association into a non-governmental regulatory and marketing body for the industry	•22
			•Develop trade associations for other supporting industry in the chilled and frozen food industry!	•22
HUMAN RESOURCES DEVELOPMENT				
Shortage of frontline workers	•Allow recruitment of foreign workers	•19	•Upgrade production technology – encourage automation	•20
Producers /Manufacturers lack knowledge in food standard and the technical know-how covering this industry	•Educate management on implementing GHP, GMP, HACCP	•2	•Educate management on implementing GHP, GMP, HACCP	•2
	•Educate & train for management on Good Management Practice	•21	•Educate & train for management on Good Management Practice	•21
	•Proposed Chilled and Frozen Food Association to be information resource centre.	•22	•Proposed Chilled and Frozen Food Association to be information resource centre.	•22
			•Ensure all c&f food producers implement GHP or GMP – mandate GHP and GMP implementation	•2

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
OPPORTUNITIES				
· [redacted]	[redacted]	•10 •16 •17 •8 •11	[redacted]	•8 •11 •10 •17 •16
· High potential areas i.e. ready meals, snack and meat-based and seafood-based products, and minimally processed vegetable as they are in the infancy stage with only a few small producers and limited product varieties	•Identify popular local food and imported c&f food •Promote local production of c&f food to foodservice providers •Encourage investment in minimally processed vegetables •Increase production •Increase products varieties, eg popular c&f food	•17 •17 •15 •8 •11	•Identify popular local food and imported c&f food •Promote local production of c&f food to foodservice providers •Encourage investment in minimally processed vegetables •Increase production •Increase products varieties, eg popular c&f food	•17 •17 •15 •8 •11
			•Penetrate overseas markets with locally product c&f food including those with meat-based product products	•17
· Popularity of the central kitchen operations	•Promote the establishment of central kitchen •Upgrade SMIs in c&f food to become suppliers to central kitchen operators	•13 •14	•Promote the establishment of central kitchen •Upgrade SMIs in c&f food to become suppliers to central kitchen operators	•13 •14
THREATS				
· Globalisation.	•Ensure cost efficiency. •Increase products varieties •Ensure high product quality •Promote locally produced c&f food aggressively •Introduce & promote Quality recognition logo for c&f food	•8 •11 •12 •17 •17	•Increase production •Increase products varieties •Ensure high product quality •Promote locally produced c&f food aggressively •Introduce & promote Quality recognition logo for c&f food to overseas markets	•8 •11 •12 •17 •17
			•Encourage all potential food exporters to implement HACCP •Encourage all non-haram food to have Halal certification	•2 •26
· Competition from non C&F Food	•Educate public on the value of c&f food- fresh alternative •Ensure high product quality •Increase product varieties •Promote locally produced c&f food aggressively	•16 •12 •11 •17	•Educate public on the value of c&f food- fresh alternative •Ensure high product quality •Increase product varieties •Promote locally produced c&f food aggressively	•16 •12 •11 •17

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
OPPORTUNITIES				
Increasing urbanisation rate and demand for convenient food	•Undertake R&D for local food •Educate public on the value of c&f food- fresh alternative •Promote local c&f food aggressively •Increase production •Increase products varieties of c&f food	•10 •16 •17 •8 •11	Market Expansion via: •Increase production •Increase products varieties of c&f food •Undertake R&D for local food •Promote local c&f food aggressively •Educate public on the value of c&f food- fresh alternative	•8 •11 •10 •17 •16
High potential areas i.e. ready meals, snack and meat-based and seafood-based products, and minimally processed vegetable as they are in the infancy stage with only a few small producers and limited product varieties	•Identify popular local food and imported c&f food •Promote local production of c&f food to foodservice providers •Encourage investment in minimally processed vegetables •Increase production •Increase products varieties, eg popular c&f food	•17 •17 •15 •8 •11	•Identify popular local food and imported c&f food •Promote local production of c&f food to foodservice providers •Encourage investment in minimally processed vegetables •Increase production •Increase products varieties, eg popular c&f food •Penetrate overseas markets with locally product c&f food including those with meat-based product products	•17 •17 •15 •8 •11 •17
Popularity of the central kitchen operations	•Promote the establishment of central kitchen •Upgrade SMIs in c&f food to become suppliers to central kitchen operators	•13 •14	•Promote the establishment of central kitchen •Upgrade SMIs in c&f food to become suppliers to central kitchen operators	•13 •14
THREATS				
Globalisation	•Ensure cost efficiency •Increase products varieties •Ensure high product quality •Promote locally produced c&f food aggressively •Introduce & promote Quality recognition [illegible] c&f food	•8 •11 •12 •17 •17	•Increase production •Increase products varieties •Ensure high product quality •Promote locally produced c&f food aggressively •[illegible] •[illegible] •[illegible]	•8 •11 •12 •17 •17 •2 •26
Competition from non c&f food	•Educate public on the value of c&f food- fresh alternative •Ensure high product quality •Increase product varieties •Promote locally produced c&f food aggressively	•16 •12 •11 •17	•Educate public on the value of c&f food- fresh alternative •Ensure high product quality •Increase product varieties •Promote locally produced c&f food aggressively	•16 •12 •11 •17

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
HALAL FOOD HUB				
• No clear vision • Activities are not well coordinated and lack concrete action plans	-For halal chilled and frozen food •Encourage c&f food producers for non-haram food to comply with the procedures of halal food production and apply halal label for the same. -For halal food hub -Further understand global market demand for halal food -Appoint an agency/department to spearhead the halal food strategies and to carry out activities such as: •Develop and promote an internationally recognised Malaysia Halal trademark •Invest in brand building for positioning Malaysia as a Halal food producer Pending on the finding of the and study on global market for halal food, promotional activities can be implemented immediately. For e.g. •Encourage food MNC to set up halal production centre in Malaysia. •Motivate other neighbouring countries to use Malaysia as a transit point for halal food. •Improve coordination and identify responsibilities of government agencies in making Malaysia a halal food hub	•26 •23 •24 •25 •25 •24	-For halal chilled and frozen food -Encourage c&f food producers for non-haram food to comply with the procedures of halal food production and apply halal label for the same. -Encourage food MNC to set up halal production centre in Malaysia. -Motivate other neighbouring countries to use Malaysia as a transit point for halal food. -Improve coordination and identify responsibilities of government agencies in making Malaysia a halal food hub. -Should the findings of the study on global market for halal food indicate it is economically beneficial for Malaysia to invest heavily to become a hub for halal food from production point, then the following are proposed: – Invest heavily in brand building for positioning Malaysia as a halal food producer. – Encourage all non-haram food producers to obtain halal certification. – Allocate land for the halal hub. – Develop world-class infrastructure equivalent to MSC, which incorporates GMP and HACCP standards.	•26 •25 •25 •24 •27 •27 •27

Challenges, Opportunities and Threats	Short Term Action Plans		Long Term Action Plans	
HALAL FOOD HUB	**•For halal chilled and frozen food** •Encourage c&f food producers for non-haram food to comply with the procedures of halal food production and apply halal label for the same.	•26	**•For halal chilled and frozen food** •Encourage c&f food producers for non-haram food to comply with the procedures of halal food production and apply halal label for the same. •Encourage food MNC to set up halal production centre in Malaysia •Motivate other neighbouring countries to use Malaysia as a transit point for halal food •Improve coordination and identify responsibilities of government agencies in making Malaysia a halal food hub	•26 •25 •25 •24
No clear vision Activities are not well coordinated and lack concrete action plans	**•For halal food hub** •Further understand global market demand for halal food •Appoint an agency/department to spearhead the halal food strategies and to carry out activities such as: •Develop and promote an internationally recognised Malaysia Halal trademark •Invest in brand building for positioning Malaysia as a Halal food producer **Pending** on the finding of the said study on global market for halal food, **promotional** activities can be implemented **immediately**. For e.g.: •Encourage food MNC to set up halal production centre in Malaysia •Motivate other neighbouring countries to use Malaysia as a transit point for halal food. •Improve coordination and identify responsibilities of government agencies in making Malaysia a halal food hub	•23 •24 •25 •25 •24	•Should the findings of the study on global market for halal food indicateit is economically beneficial for Malaysia to invest heavily to become a hub for halal food from production point, then the following are proposed: • Invest heavily in brand building for positioning Malaysia as a halal food producer • Encourage all non-haram food producers to obtain halal certification • Allocate land for the halal hub • Develop world-class infrastructure equivalent to MSC, which incorporates GMP and HACCP standards	•27 •27 •27

CHART 9.2 : ACTION PLANS

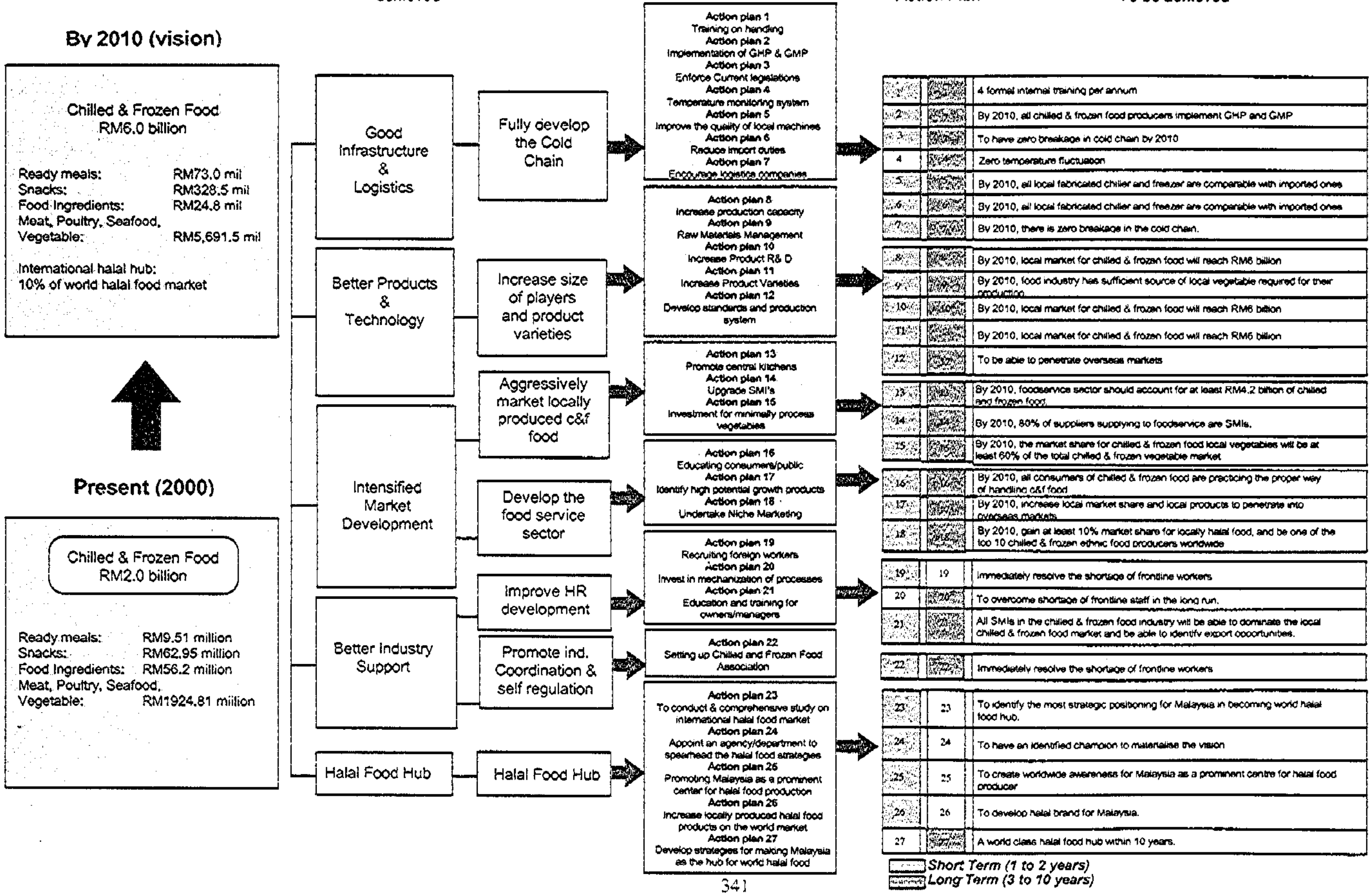
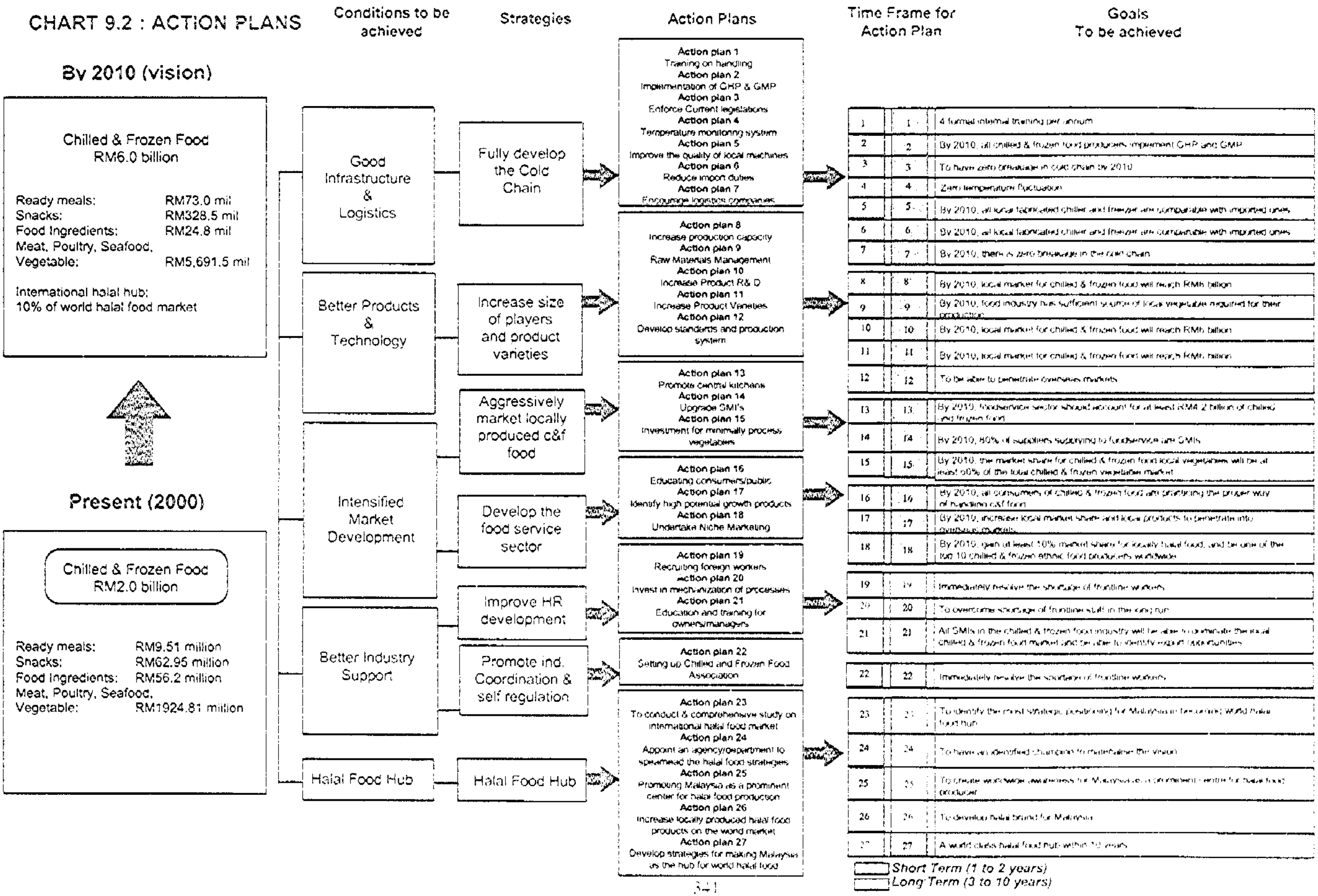


CHART 9.2 : ACTION PLANS



Chapter 10

CONCLUSION AND RECOMMENDATION

CHAPTER 10

CONCLUSION AND RECOMMENDATION

The demand for chilled and frozen food has been increasing in both developed and developing countries, such as Malaysia mainly due to changing demographic and lifestyle. In Malaysia, the chilled and frozen food industry is considered to be at an infancy stage. The state of cold chain, chilled and frozen food handling awareness, consumer perception, food technology and R&D knowledge are still far from the desired level. This study has also identified the potential food segments to be further developed e.g. local ethnic food and snacks, minimally processed vegetables and central kitchen operations.

Although this Study reveals that the Malaysian chilled and frozen food industry has great potential in the future, the existing limited industry infrastructure and knowledge would hinder the growth of the industry. Accordingly, it is believed that Government needs to intervene to realise the projected market potential and ensure orderly development of the chilled and frozen food industry.

Accordingly, strategies and action plan together with the implementation timeframe have been formulated to achieve the vision recommended by this Study. It is strongly recommended that the Malaysian Government spearheads the implementation of proposed action plans during the initial period, as adequate financial and policy supports are needed.

LIST OF APPENDIX

APPENDIX

1	*Location of Consumer Survey (List of Shopping Malls)*
2	*Demographic Data of Surveyed Respondents*
3	*Questionnaire for Consumer Survey*
4	*Questionnaire for Industry Players in the Chilled and Frozen Food*
5	*Selected Retailers and their Products Range, Purchase and Retail Prices*
6	*List of Companies Certified to the Various Standards*
7	*Frigoscandia Classic Line C3 88*
8	*Flow Chart for a Further Processing Line Operation*
9	*Surimi Processing Flow Chart*

APPENDIX 1

Location of Consumer Survey
(List of Shopping Malls)

LOCATION OF CONSUMER SURVEY (LIST OF SHOPPING MALLS)

	Shopping Mall	Frequency	Percent	Valid Percent	Cumulative Percent
	Sg Wang	7	.9	.9	.9
	Megamall	33	4.1	4.1	5.0
	Carrefour Subang Jaya	33	4.1	4.1	9.1
	Sunway Pyramid	36	4.5	4.5	13.6
	Cold Storage SS14	35	4.4	4.4	18.0
	BB Plaza	15	1.9	1.9	19.9
	Sogo	24	3.0	3.0	22.9
	The Mall	20	2.5	2.5	25.4
	Amcorp Mall	9	1.1	1.1	26.5
	One Utama	7	.9	.9	27.4
	Wangsa Maju (Alfa Angle)	14	1.8	1.8	29.2
	Subang Parade	17	2.1	2.1	31.3
	Bansar Mall	14	1.8	1.8	33.0
	Plaza Pheonix	46	5.8	5.8	38.8
	Leisure Mall	19	2.4	2.4	41.2
	Mydin (Jln Masjid India)	30	3.8	3.8	44.9
	Kotaraya (S&M, Metrojaya)	10	1.3	1.3	46.2
	Metrojaya SS 14	3	.4	.4	46.6
	Lot 10	2	.3	.3	46.8
	Jusco Tmn Maluri	18	2.3	2.3	49.1
	Jaya Jusco Klang	110	13.8	13.8	62.8
	Tmn Lucky Garden	9	1.1	1.1	64.0
	Baturoad	3	.4	.4	64.3
	Mines	25	3.1	3.1	67.5
	Extra	5	.6	.6	68.1
	Submmit	9	1.1	1.1	69.2
	Bukit Jambul	22	2.8	2.8	72.0
	Sunshine (Penang)	16	2.0	2.0	74.0
	Komtar (Penang)	2	.3	.3	74.2
	Bkt Jambul (Penang)	31	3.9	3.9	78.1
	Ipoh Parade	41	5.1	5.1	83.2
	Superkinta (Ipoh)	20	2.5	2.5	85.7
	Terminal 1 (Seremban)	32	4.0	4.0	89.7
	The Store (Seremban)	11	1.4	1.4	91.1
	Seremban Parade	17	2.1	2.1	93.2
	City Square(JB)	48	6.0	6.0	99.2
	Kotaraya (JB)	3	.4	.4	99.6
	Penang	3	.4	.4	100.0
	Total	799	99.9	100.0	
Missing	System	1	.1		
Total		800	100.0		

APPENDIX 2

Demographic Data of Surveyed Respondents

DEMOGRAPHIC DATA OF SURVEYED RESPONDENTS

	Frequency	Percent (%)
Place:		
Klang Valley	554	69.3
Penang	59	7.4
Ipoh	61	7.6
Seremban	60	7.5
Johor Bahru	66	8.3
Gender:		
Male	395	49.4
Female	404	50.6
Race:		
Malay	353	44.2
Chinese	247	30.9
Indian	154	19.3
Foreigners	35	4.4
Others	10	1.3
Age:		
< 18	30	3.8
18-24	242	30.3
25-34	264	33.0
35-44	187	23.4
45-55	69	8.6
>55	7	0.9
Marital status:		
Married	420	52.6
Single	378	47.4
Family monthly income:		
< RM 1,000	88	11.0
RM 1,001-2,000	161	20.2
RM 2,001-3,000	179	22.5
RM 3,001-4,000	141	17.7
RM 4,001-5,000	97	12.2
> RM 5,000	131	16.4
Contributor of family income:		
Respondents	418	52.3
Spouse	241	30.1
Children of the family	34	4.3
Other family members	296	37.0
Family size:		
1-3	174	21.8
4-6	467	58.4
7-9	133	16.6
10 and more	25	3.1

DEMOGRAPHIC DATA OF SURVEYED RESPONDENTS (cond't)

	Frequency	Percent (%)
Stage of education:		
Primary	29	3.6
Secondary	266	33.3
Higher (Certificate/Diploma)	270	33.8
Tertiary (Bachelor, Master, PhD)	233	29.2
Ownership of household appliance:		
Normal fridge	779	98.6
Independent freezer	109	13.9
Oven	595	75.6
Microwave oven	400	50.8

* Number of respondents are 800

APPENDİX 3

Questionnaire for Consumer Survey

QUESTIONNAIRE FOR CONSUMER SURVEY

Section A : Chilled and Frozen Food (eg: frozen *murtabak, pau, mantau*, fish balls, sausage, burger, nugget, crab meat, chilled chicken)

1. Do you know the difference between chilled and frozen foods?
   - ☐ Yes
   - ☐ No

2. Do you consume chilled foods?
   - ☐ Yes
   - ☐ No

3. Do you consume frozen foods?
   - ☐ Yes
   - ☐ No

4. Do you know that chilled foods are available in the market?
   - ☐ Yes
   - ☐ No

5. Do you consider chilled foods as healthy foods?
   - ☐ Yes
   - ☐ No

6. Do you consider frozen foods as healthy foods?
   - ☐ Yes
   - ☐ No

7. What factors are your major concerns when purchasing chilled & frozen foods? Please rank the following factors according to their importance. (Number 1 is the most important, 2 as second most important and so forth).

Factor	Importance
Quality	
Price	
Halal status	
Hygiene	
Outlet	
Brand	
Taste	
Nutritious/healthy	
Convenience (easy to obtain, time saving)	
Attractiveness of the packaging	

8. Please rank the following foods according to their perceived quality. (Number 1 is the highest quality food, 2 as second and so forth).
   - ☐ Frozen foods
   - ☐ Chilled foods (fresh & processed)
   - ☐ Canned foods

9. What types of foods do you normally consume?
   - ☐ Home-cooked meals
   - ☐ Eating out
   - ☐ Convenience foods (such as chilled and frozen foods)
   - ☐ Canned foods
   - ☐ Others____________________

10. How do you determine the halal status of foods? (First choice)
    - ☐ **The halal logo stated on the label**
      Would you accept?
      - ☐ Only official logo by JAKIM
      - ☐ Any logo indicating halal status
    - ☐ **Check the ingredients**
    - ☐ **Both**

11. How do you determine the halal status of foods if there is no halal logo stated on the label?
    - ☐ Check the ingredients
    - ☐ Brand name
    - ☐ Manufacturer
    - ☐ Look at the packaging/words

12. In your opinion, should the Government standardized the halal logo?
    - ☐ Yes
    - ☐ No

Section B : Chilled & Frozen Meals & Snacks

	Please check if you consume these foods	How many packages do your family consume per month?	Consumption Frequency				
			< Once a month	Once a month	Once a week	2-3 times a week	Daily
Frozen *karipap*							
Frozen *murtabak*							
Frozen *pau*							
Frozen *mantau*							
Frozen spring rolls							
Frozen *roti pratha*							
Frozen *roti canai*							
Frozen *samosa*							
Frozen pizza							
Frozen pies							
Chilled *nasi lemak*							
Frozen *naan/capati*							

The following questions focuses on this category of food in general:

1. Do you like these types of chilled and frozen meals & snacks?
   - ☐ Yes
   - ☐ No

2. When do you normally eat chilled and frozen meals & snacks?
   - ☐ Morning as breakfast
   - ☐ Lunch as full meal
   - ☐ Dinner as full meal
   - ☐ Tea break as snacks
   - ☐ Anytime

3. Who normally consumes chilled and frozen meals & snacks in your family?
   - ☐ Children
   - ☐ Adult
   - ☐ Senior citizen at home
   - ☐ All family members
   - ☐ Only myself

4. Where do you normally purchase chilled and frozen meals & snacks?
   - ☐ Supermarket/hypermarkets
   - ☐ Mini market/groceries
   - ☐ Wet markets
   - ☐ Night markets
   - ☐ Deli shops

5. How frequent do you purchase chilled and frozen meals & snacks?
   - ☐ Daily
   - ☐ 2-3 time a week
   - ☐ Once a week
   - ☐ Once a month
   - ☐ < Once a month

6. How many packages do you purchase at one time?
   - ☐ Only 1 package
   - ☐ 2-3 packages
   - ☐ 4-5 packages
   - ☐ 6-7 packages
   - ☐ 8-9 packages
   - ☐ 10 or more

7. Normally who does the purchasing of chilled and frozen meals & snacks?
   - ☐ Yourself
   - ☐ Spouse
   - ☐ Senior citizen at home
   - ☐ Children
   - ☐ Maids

8. Will you continue to consume chilled and frozen meals & snacks?
   - ☐ Yes
   - ☐ No

Section C : Chilled & Frozen Food Ingredients

	Please check if you consume these foods	How many packages do your family consumes per month?	Consumption Frequency				
			< Once a month	Once a month	Once a week	2-3 times a week	Daily
C&F coconut milk/grated							
Chilled spices pastes							
Frozen vegetables							
Chilled vegetables							
Chilled fruits							
Cendol/cincau							

The following questions focuses on this category of food in general:

1. Do you like these type of chilled and frozen food ingredients?
   - ❑ Yes
   - ❑ No

2. When do you use chilled and frozen food ingredients?
   - ❑ Preparing normal meals
   - ❑ Preparing snacks
   - ❑ Eaten as fresh

3. Who normally uses chilled and frozen food ingredients in your family?
   - ❑ Children
   - ❑ Adult
   - ❑ Senior citizen at home
   - ❑ All family members
   - ❑ Only myself

4. Where do you normally purchase chilled and frozen food ingredients?
   - ❑ Supermarket/hypermarkets
   - ❑ Mini market/groceries
   - ❑ Wet markets
   - ❑ Night markets
   - ❑ Deli shops

5. How frequently do you purchase chilled and frozen food ingredients?
   - ❑ Daily
   - ❑ 2-3 time a week
   - ❑ Once a week
   - ❑ Once a month
   - ❑ < Once a month

6. How many packages do you purchase at one time?
   - ❑ Only 1 package
   - ❑ 2-3 packages
   - ❑ 4-5 packages
   - ❑ 6-7 packages
   - ❑ 8-9 packages
   - ❑ 10 or more

7. Normally who does the purchasing of chilled and frozen food ingredients?
   - ❑ Yourself
   - ❑ Spouse
   - ❑ Senior citizen at home
   - ❑ Children
   - ❑ Maids

8. Will you continue to use chilled and frozen food ingredients?
   - ❑ Yes
   - ❑ No

Section D : Chilled & Frozen Meat & Seafood Products

	Please check if you consume these foods	How many packages your family consume per month?	Consumption Frequency < Once a month	Once a month	Once a week	2-3 times a week	Daily
C&F Burger							
C&F Sausages							
C&F Nuggets							
C&F Seafood							
C&F Meat cuts							
C&F Chicken							
C&F *Satay/kebab*							
TV Dinner/lunch meal pack							
Japanese type meat (RTE)							
Marinated meat (RTE)							

The following questions focuses on this category of food in general:

1. Do you like these types of chilled and frozen meat & seafood products?
   - ☐ Yes
   - ☐ No

2. When do you normally take chilled and frozen meat & seafood products?
   - ☐ Preparing normal meal
   - ☐ Preparing snacks
   - ☐ Eaten as fresh

3. Who normally consumes chilled and frozen meat & seafood products in your family?
   - ☐ Children
   - ☐ Adult
   - ☐ Senior citizen at home
   - ☐ All family members
   - ☐ Only myself

4. Where do you normally purchase chilled and frozen meat & seafood products?
   - ☐ Supermarket/hypermarkets
   - ☐ Mini market/groceries
   - ☐ Wet markets
   - ☐ Night markets
   - ☐ Deli shops

5. How frequently do you purchase chilled and frozen meat & seafood products?
   - ☐ Daily
   - ☐ 2-3 time a week
   - ☐ Once a week
   - ☐ Once a month
   - ☐ < Once a month

6. How many packages do you purchase at one time?
   - ☐ Only 1 package
   - ☐ 2-3 packages
   - ☐ 4-5 packages
   - ☐ 6-7 packages
   - ☐ 8-9 packages
   - ☐ 10 or more

7. Normally who does the purchasing of chilled and frozen meat & seafood products?
   - ☐ Yourself
   - ☐ Spouse
   - ☐ Senior citizen at home
   - ☐ Children
   - ☐ Maids

8. Will you continue to consume chilled and frozen meat & seafood products?
   - ☐ Yes
   - ☐ No

Section E : Futuristic Questions

1. Would you continue buying chilled and frozen food in the future?
   - ☐ Yes
   - ☐ No

2. Which category of food is your preference? (Please rank the answer with number 1 as most preferable, 2 as second and so forth)
   - ☐ Chilled and frozen meals and snacks
   - ☐ Chilled and frozen food ingredients
   - ☐ Chilled and frozen meats and seafood

3. How much are you willing to spend on chilled and frozen foods per month?
   - ☐ <RM 100
   - ☐ RM 101-200
   - ☐ RM 201-300
   - ☐ RM 301-400
   - ☐ RM 401-500
   - ☐ > RM 500

4. Would you be willing to pay more for chilled & frozen food products that are properly handled, stored and displayed?
   - ☐ Yes
   - ☐ No

5. What taste of food is your favorite?
   - ☐ Hot and spicy
   - ☐ Sweet
   - ☐ Sour
   - ☐ Bitter
   - ☐ Salty

6. Following is the list of chilled & frozen varieties of products, please check according to your preferences.
   - ☐ Western
   - ☐ Japanese
   - ☐ Malay
   - ☐ Chinese
   - ☐ Indian
   - ☐ Middle Eastern
   - ☐ Other local variety

7. Please state your degree of agreement with the following statements

Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Chilled & frozen food form a significant proportion of my total food consumption.	1	2	3	4	5
I will consume more of these types of food in the future.	1	2	3	4	5
Most of the people around me consume chilled and frozen food.	1	2	3	4	5
The consumption of chilled & frozen food will be an important trend of the future.	1	2	3	4	5
I always try new food products in the market	1	2	3	4	5
I always come across chilled & frozen food advertisements (in various media).	1	2	3	4	5
I am satisfied with the chilled & frozen food that I consumed.	1	2	3	4	5
I always try new chilled & frozen food products at the supermarket food testing section.	1	2	3	4	5

8. In general, what do you think about chilled and frozen food? (e.g. which chilled & frozen food products you like the most?, why you don't try other chilled & frozen food products?)

Section F : Socio-demographic

Residence
- ☐ Urban
- ☐ Sub-urban
- ☐ Rural

Gender
- ☐ Male
- ☐ Female

Race
- ☐ Malay
- ☐ Chinese
- ☐ Indian
- ☐ Foreigners
- ☐ Others

Age
- ☐ <18
- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-55
- ☐ >55

Marital status
- ☐ Marriage
- ☐ Single

Family Income
- ☐ < RM 1,000
- ☐ RM 1,000-2,000
- ☐ RM 2,001-3,000
- ☐ RM 3,001-4,000
- ☐ RM 4,001-5,000
- ☐ > RM 5,000

Contributor of family income
- ☐ Myself
- ☐ My Spouse
- ☐ Children
- ☐ Other family members

Education
- ☐ Primary
- ☐ Secondary
- ☐ Higher (Certificate/Diploma)
- ☐ Tertiary

Family size
- ☐ 1-3
- ☐ 4-6
- ☐ 7-9
- ☐ 10 and more

Do you have these facilities at home?

A normal fridge	Yes	No
An independent freezer	Yes	No
Oven	Yes	No
Microwave oven	Yes	No

Numerator Name:__________________ Location: __________ Date:__________