



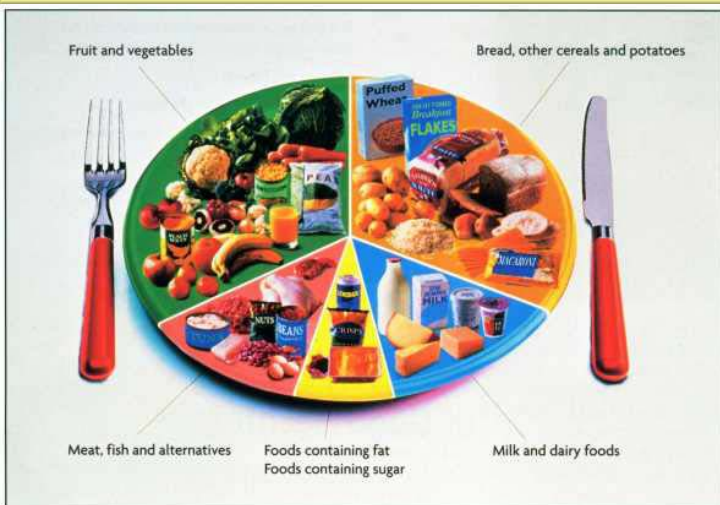
NATIONAL RESEARCH GROUP ON IMPACTS OF FOOD QUALITY ON HUMAN HEALTH

❧ Identified Research Priorities ❧

02 FEBRUARY 2012



DIET & HEALTH



Diabetes

- ~17% of population
- **4th highest rate** in the world
- Consequences: Disabling(amputation) & fatal complications
- Annual amputation rate: **400 people**
- Causes: Genetic pool, High saturated fats : toxic to pancreas

Overweight

- **50.9%** of population overweight & obese
- **7.4%** of age group 12-19 years obese & **8.4%** overweight

Lipids
(Abnormal Cholesterol
& other blood fat)

• **25-35%**

Coronary Heart Disease

• **Death rate: ~
3580 per year**

Hypertension

• **37.9%**

**DIET- RELATED
DISEASES**

**Main Causes Of Death in 2010:
Diabetes, Heart Disease, Cancer
= ~54% death**

Sources:

Mauritius Non Communicable Disease Survey Report, 2009, Ministry of Health and Quality of Life

National Cancer Control Programme, Action Plan: 2010 -2014; tmhc.gov.uk

Food Safety

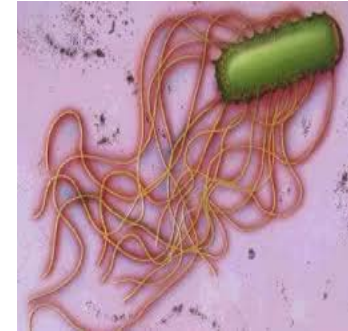
Number of reported food poisoning cases during the past 12 months: **288**

Number of Death: **5**



Causes of Contamination:

- Micro organism Contamination: 264
- Chemical Contamination : **15**
- Foreign Matter contamination: **1**
- Toxic Plant / Fish: **8**



Sources of Contamination:

- Toxic intake (Fish + Plant)
- Expired canned food
- Contamination on site of food preparation (Restaurant, Bakery & Home Cooking)



Datura

Cancer

- **1400** new cases of cancer every year
- Annual cancer death rate: **900**
- Diet linked to cancer of bowel, stomach & breast

Constitution of a Multi institutional and Multidisciplinary Core Group in July 2011

Public Sector

- MRC
- AREU
- Ministry of tertiary education, Science, Research & Technology
- MSB
- Ministry of Agro Industry & Food Security
- Ministry of Health & Quality of Life
- Ministry of Industry, Commerce & Consumer Protection

Private Sector

- MCCI
- APEXHOM
- Food & Allied LTD
- Universal Development Corporation
- Animaterra Co.LTD

Academia

- University of Mauritius
Dr. Pugo-Gunsam
Chairperson

**7 consultative
meetings (Jul to
Dec 2011)**

APPROACH

FOOD SUPPLY CHAIN

From farm



To fork



Agricultural
Production

Consumers

STAKEHOLDERS' RESPONSIBILITIES FOR FOOD QUALITY AND SAFETY

SALE, MANUFACTURING/PROCESSING,
PACKAGING

**GOOD
AGRICULTURAL
PRACTICES**

**GOOD
DISTRIBUTION
PRACTICES**

**GOOD
MANUFACTURING
PRACTICES**

**GOOD
DISTRIBUTION
PRACTICES**

REGULATORY MECHANISM AND LEGAL FRAMEWORK

Emanation of Sub-committees

- Food Regulations and Standards;
- Traceability and Monitoring of Food Safety;
- Sustainable Agriculture in Mauritius and
- Food Quality Issues

Tasks of Subcommittees

- focus on
- the current status,
- relevant policies and strategies,
 - The Maurice Ile Durable Program
 - Strategic Options in Crop Diversification and Livestock Sector (Ministry of Agro Industry (2007-2015)
 - The Food Security Fund Committee-Strategic Plan (2008-2011).
 - National Plan of Action for Nutrition (2009-2010)
- projects,
- governing legislations,
- the gaps,
- challenges and emerging issues of each theme.

Presentation to a wider range of stakeholders in a national workshop on 15 September 2011.

RESEARCH THEMES



Issues

- **Bad eating Habits (Snacking/Junk)**
- **Fast tracked lines**
- **Working parents**
- **No demand for best quality of food**
- **Not able to make informed choices**
- **Need to empower Mauritians to select good quality food**

THEME 1

**Education
And
Awareness**

Issues

- General perception that GAP's should be improved
- Need for sustainable agricultural production
 - *Reduced use of chemical pesticides and fertilizers*
 - *Increased use of bio-products*

THEME 2

**Sustainable
Agricultural
Production
System**

Issues

- High prevalence of diabetes, heart disease, hypertension and obesity
- Bad cooking habits
- Bad eating habits
- Reuse of cooking oils
- High prevalence of anaemia in adolescent girls and pregnant women (27%)

THEME 3



**Diet related
Research**

Issues

- Need for onsite rapid testing\need for new and modern equipments
- High analysis Time (Turn-over)
- Need for tagging method at all production levels for traceability
- Lack of information on the origin of feed/food ingredients and food sources

THEME 4

Traceability and monitoring

Relevant Stakeholder

- Ministry of Health and Quality of life
- Ministry of Agro-Industry and food Security
- Ministry of Industry, Commerce and Consumer Protection (MSB)
- Ministry of Fisheries and Rodrigues

Objective

- To achieve food safety through food inspection, product tracing and product recalls

Issues

- Need for self-regulation and Quality Assurance along value chain
- Barriers due to lack of harmonisation of standards on different market
- Need for a multi-sectoral platform to federate all stakeholders
- Perception that public is not adequately protected from unwholesome, mislabeled or adulterated food
- Need for a paradigm shift for food safety evaluation from end-product testing to food chain monitoring

- Science based and precise
- Practical and enforceable to all operators
- Harmonized with international norms

THEME 5



Food Regulations and Standards

Relevant Stakeholder


- Ministry of Industry, Commerce and Consumer Protection
- Ministry of Agro-Industry and food Security
- Ministry of Health and Quality of life
- MSB
- National Codex Committee

Enforcement of Regulations:

- Food Act, Meat Act, Plant Protection Act, Fair Trading Act


Main Objective


- Protecting public health

	Short Term (0-2 years)	Medium Term (2- 4 years)	Long Term (4-6 years)
Area of Intervention	Education and Awareness		
Objective 1	To provide consumers with the skills and Knowledge to consume safe and healthy food		
Research Direction/ project	Booklets on Food Safety Booklet on Quality Nutrition for the Mauritian Population	Information Booklets for operators in the Food Industry	Inclusion of Nutrition and food quality in Primary School Curriculum of study
	Small Television spots/ Programme on nutrition, food safety and quality related issues		
	Radio Programme for sensitization of Producers and consumer education on food quality issues		
Objective 2	To Train Farmers to adopt good agricultural practices		
Research Direction/ project	To reinforce training programme to help farmers and adopt GAPs and to keep record of pesticide and fertiliser used [On-going activity by AREU]		
	Regular capacity building for Trainers (Training of trainers) to understand new techniques and systems		

	Short Term (0-2 years)	Medium Term (2- 4 years)	Long Term (4-6 years)
Area of Intervention	Sustainable Agriculture and Nutritional Farming		
Objective 1	To promote sustainable agriculture and Nutritional Farming		
Research Direction/ project	Evaluation of Soil Health management practices in different soil, climate and cropping system		
	Restoration of Soil Health in Mauritius		
	To further develop integrated pest and disease management practices under local condition		
Objective 2	To promote production of underutilised vegetables and Fruits		
Research Direction/ project	Valorisation of Specific fruits/ food crops in Mauritius and Rodrigues		
Objective 3	To Promote Nutrition Farming		
Research Direction/ project	To develop a planning tool for soil fertility amendments and nutrient balance		

	Short Term (0-2 years)	Medium Term (2- 4 years)	Long Term (4-6 years)
Area of Intervention	Diet – Related Research		
Objective 1	<i>To ensure a safe and quality nutrition for the Mauritian Population</i>		
Research Direction/ project	Study to identify why the reuse of cooking oils in Mauritius is still currently practised	Development of legislative measures regarding reuse of cooking oil	
	Studies to identify the causes of anaemia in A study on Iron Supplement with a view to decrease the occurrence of anaemia in the Mauritian population		
	Developing a typical healthy Mauritian plate for human consumption		

	Short Term (0-2 years)		Medium Term (2- 4 years)	Long Term (4-6 years)
Area of Intervention	Traceability and Monitoring throughout the food chain			
Objective 1	To achieve food safety through food inspection, product tracing and product recalls			
Research Direction/ project	Preparing a report of Food Regulations and proposed amendments to facilitate recall of food products	Improving facilities with improved, new and modern equipments for the testing of pesticides residues, antibiotic and adulterants		
	Introduction of onsite rapid testing on a pilot basis	Reduced Analysis Time (Turn-over) by developing more new, rapid instrumental methods of analysis		
	Developing of Tagging method throughout the food chain	Implementation of GS1 Traceability Standard by the MCCI		
Objective 2	To monitor pesticide residues in the food chain through a surveillance programme			
Research Direction/ project	Enhanced monitoring of selected food items (locally and Imported) for pesticide/ fertiliser residues Dissemination of Results of analysis to the Public and Stakeholders	Developing a monitoring system for traceability of agrochemical usage	To implement regulation and legislative mechanisms to ensure safe levels of pesticide residues on food items.	
Objective 3	To Monitor consumption of GMOs in Mauritius			
Research Direction/ project	Capacity Building for the setting up of GMO detection Facility at Food Technology Laboratory		Survey on the different aspects and composition of GMO in Mauritian Food	
Objective 4	To continuously collect, analyse and utilise data on specific nutrition indicators to monitor the nutritional status of the population			
Research Direction/ project	Development of a data collection, analysis and reporting system related			

	Short Term (0-2 years)	Medium Term (2- 4 years)	Long Term (4-6 years)
Area of Intervention	Food Regulations and Standards		
<i>Objective 1</i>	<i>To enforce standards in Food Safety such as HACCP and Others</i>		
Research Direction/ project	Development of Guidelines similar to HACCP applicable to SMEs/ Food Sector		
<i>Objective 2</i>	<i>To allow consumer to obtain nutritional Information at a glance</i>		
Research Direction/ project	Introduction of GDA labeling	Responsible Consumer Communication and Advertising campaign on Health Claims	
<i>Objective 3</i>	<i>To reinforce the regulatory framework to ensure food Quality and Safety</i>		
Research Direction/ project		Research on institutional structure for the Setting up of a multi-institutional and multi-Sectoral National Food Regulatory Body	
		Setting up of legislations on Health Claims Labelling	
		Setting up of legislations on Labelling of Toxicity and pesticide residues in processed food or raw ingredients	

ACKNOWLEDGEMENT



Organisation	Technical Committee Members
Chairperson	Dr P Pugo Gunsam (UoM)
Agricultural Research and Extension Unit (AREU)	Mr D Abeeluck
Ministry of Industry Commerce and Consumer Protection	Mr A D Seetohul
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Mauritius Chamber of Commerce and Industry	Dr H Khoodoo; Mrs A Chikhuri
University of Mauritius	Mrs S D Biranjia-Hurdoyal
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Pick'N'Eat Ltd, (KFC), Member of Food and Allied Group	Mrs C Deville
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**All Participants in the Workshop of 15
September 2011**

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Thank You For Your Attention

