

IntroduCInG the Food Loss and Food Waste Reduction and RecoverY Initiative

Daya Goburdhun, Assoc Professor (FST)
Faculty of Agriculture
University of Mauritius



The Faculty of Agriculture UNIVERSITY OF MAURITIUS



**108 years of excellence in
teaching, research in Agriculture
and food sectors
yet more vibrant, proactive and
dynamic with time**

Faculty of Agriculture

Department of Agricultural and Food Science

- Agricultural and Soil Chemistry
- Aquaculture & Crop Protection
- Biotechnology & Microbiology
- Food Science & Technology (+ Postharvest Technology)

Department of Agricultural Production & Systems

- Crop Science & Production
- Animal Science & Production
- Agribusiness Management & Agri-food Value Chain Development
- Statistics & Biometry
- IT & Scientific Communication in Agriculture
- Agricultural Engineering

UoM Farm, an open laboratory of 21 acres



EVOLUTION OF THE FACULTY

Proactive response to emerging challenges
response

Modifying its programme structure

Change in content-inclusion of new areas

Bioinformatics, Climate Smart Agriculture, Organic Farming, Food Security, Sustainable Agriculture, Agribusiness & Entrepreneurship; New Product development, Biodiversity, Aquafarming, Food Safety and Quality



Variety Yr 2000 & beyond- >30 different PrOG

B. Sc (Hons) Food Science
with Marketing
with Nutrition
with Home Economics
B. Sc (Hons) Food Science and Technology
B.Sc (Hons) Food Science
B.Sc Food Safety and Quality
BSc Food Science and Technology
Minor Seafood Technology
Minor Food Microbiology
BSc (Hons) Food Hygiene and Environmental Health
BSc (Hons) Biotechnology
B. Sc (Hons) Applied Biochemistry
BSc(Hons) Sustainable Agriculture and Food Security
BSc (Hons) Microbiology

BSc (Hons) Agriscience and Aquaculture Technology
B. Sc (Hons) Agriculture
with Food Science
with Environmental Science
with Business Management
with Natural Resource anagement
sp. In Agribusiness
sp. In Agricultural Extension
sp. In Land and water Management
sp . In Crop Protection
sp. In Plant Biotechnology
sp. In Organic Farming
B.Sc (Hons) Horticulture with sp in Soiless & Protected
Culture
B. Sc Crop Technology
B. Sc (Hons) Agricultural Biotechnology
BSc Agriscience and Technology
with organic farming
Minor: Animal Production and Health
Minor Agribusiness Management

Years 2000 onwards- Postgraduate programmes

MSc Crop Science with sp. In Plant Biotechnology
MSc Agricultural Management
MSc Crop Science
MSc Tropical Animal Production
MSc Food Science
MSc Food Biotechnology
MSc Food Technology
MSc Sustainable Agrochemical Management
MSc Bioinformatics
MSc Agribusiness Management (Regional)
MSc Climate Change and Sustainable Development

ROLE OF THE FACULTY

- Research
- Consultancy
- Outreach

in the areas of Food and Agriculture

- New: Six month internship in many B. Sc programmes: an enhanced opportunity for collaboration between the Faculty of Agriculture and the stakeholders of the food, agricultural and hospitality sectors

Food loss and Food Waste- unresearched area (FW)
Not well known among the population though waste management
has received lots of attention

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graph TD; A[Food Wastage] --> B[Food Loss]; A --> C[Food waste]
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Food Wastage

Food Loss

Food waste

At the Faculty
BSc projects on

- Postharvest losses
- knowledge, attitude and practices towards food waste among consumers in Mauritius
- Knowledge, attitudes and practices relating to waste segregation and composting among households in the district of Pamplemousses
- Food waste in markets
- Understanding and use of food labelling



THE 1st ALL AFRICA POST HARVEST CONGRESS & EXHIBITION

Reducing food losses and waste: *Sustainable solutions for Africa*

28th to 31st March 2017 Safari Park Hotel, Nairobi, Kenya

AN EYE OPENER FOR MAURITIUS



Mauritius– MEMBER of un AnD AfRICAn union



United Nations

United Nation's
Sustainable Development
Goals (SDG 12.3)



Malabo Declaration
by the African Union

a commitment to **halve the post-harvest losses** from the current levels by the years 2030 (UN) and 2025 (AU) respectively

To help OUR COUNTRY ,

the Faculty of Agriculture of the University of Mauritius aims to lead
“Food Loss and Food Waste Reduction and Recovery” Initiative

Aim : To create national awareness on food loss and food waste reduction among all stakeholders along the farm-to-fork continuum



UNIVERSITY OF MAURITIUS, FACULTY OF AGRICULTURE

**Food Loss & Food Waste
Reduction & Recovery Initiative**



**Say NO
to food
waste**

**FORUM ON POST-HARVEST LOSS OF
FRUITS AND VEGETABLES**
Faculty of Agriculture and FAREI
15th February 2018

CONFERENCE on
Food Loss & Food Waste Reduction & Recovery
Faculty of Agriculture *in collaboration with*
the Mauritius Research Council
27th-28th February 2018

AWARENESS CAMPAIGN
February 2018 - March 2019

EXPERT WORKING SESSION
1st March 2018

<http://sites.uom.ac.mu/foodloss>

The iniTiaTive

- Sharing of knowledge on food losses and food waste at the global level and national level
- Devising a framework for reducing food loss and food waste
- Raising awareness among all actors of the food chain
- Developing collaboration and networking to share best practices and to support project in food loss and food waste reduction

FORUM ON

Postharvest losses of fruits and vegetables

Faculty of Agriculture, University of Mauritius

in collaboration with

Food and Agricultural Research and Extension Institute

Date: 15th February 2018

Time: 9.00-12.00

Venue: University of Mauritius

Resource person: **Mr S.Chandra, Chandra Associates, USA**

FORUM ON

Postharvest losses of fruits and vegetables

- FAREI: overview of food losses
- Resource person: shared information on postharvest losses, and use of plastic and controlled atmosphere to extend the shelflife
- Open discussion of the audience

CONFERENCE ON FOOD LOSS AND FOOD WASTE REDUCTION AND RECOVERY

FACULTY OF AGRICULTURE
(UNIVERSITY OF MAURITIUS)

&

THE MAURITIUS RESEARCH COUNCIL(MRC)

Dates: 27th February-1st March 2018

Time: 9.00 hrs -15.00 hrs

Venue: RBLT, University of Mauritius

INTERNATIONAL
SPEAKERS

PROGRAMME

AUDIENCE



Time	Topic	Speaker
09:00 - 10:00	Registration and Welcome	
10:00 - 11:00	Keynote Address: The State of Food Security and Nutrition in the World 2017	Dr. Heide Kluge
11:00 - 12:00	Panel Discussion: Food Loss and Waste Reduction and Recovery	Dr. Heide Kluge, Dr. Anurag K. Singh, Dr. Anurag K. Singh, Dr. Anurag K. Singh
12:00 - 13:00	Lunch	
13:00 - 14:00	Workshop: Food Loss and Waste Reduction and Recovery	Dr. Heide Kluge, Dr. Anurag K. Singh, Dr. Anurag K. Singh, Dr. Anurag K. Singh
14:00 - 15:00	Closing Remarks	Dr. Heide Kluge



CONFERENCE ON FOOD LOSS AND FOOD WASTE REDUCTION AND RECOVERY

- Target: about 90 participants
- Overall aim of the conference (27-28 Feb): to provide a platform for our stakeholders to share information about causes, types of food loss and waste, global initiatives for food loss & waste reduction and recovery

EXPERT WORKING SESSIONN

1st March 2018

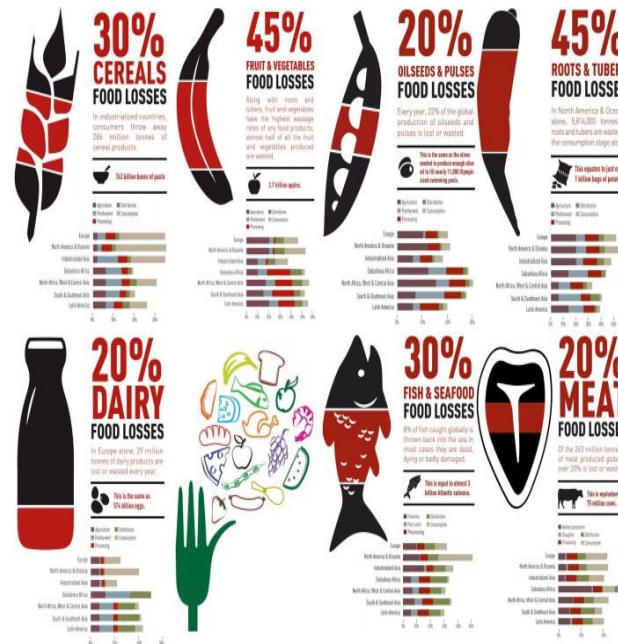
- Selected group of participants (around 30) for more in-depth work on way forward
- Identification of causes and possible solutions for food loss and food waste along the whole supply chain from primary production to consumers
- Devising collaboratively with the experts , a set of actions which can be implemented by educational, research, private and public organizations, governments, and general public to reduce food loss and waste
- Identification of gaps and areas of research
- Build partnerships for identifying and implementing interventions to reduce food loss and food waste

AwAreness rAising (Feb 2018-March 2018)

- Aggressive media campaign (Media, radio stations; newspapers; magazines)
- Preparation of flyers to be distributed among stakeholders (simple,powerful messages in foodcourts, cafeterias; tips to reduce food waste posters in hotel kitchen and for tourists; clear explanation and interpretation of date marking)
- Talks in educational institutions, on campus and public places
- Organisation of Competition/quiz for students (Best video on food loss and food waste)
- Tailor - made workshops to educate different segments of the population (consumers, producers, processors, distributors, retailers, caterers..)
- Rallies
- Mass Meetings

Not much data on magnitude of food losses and food waste locally

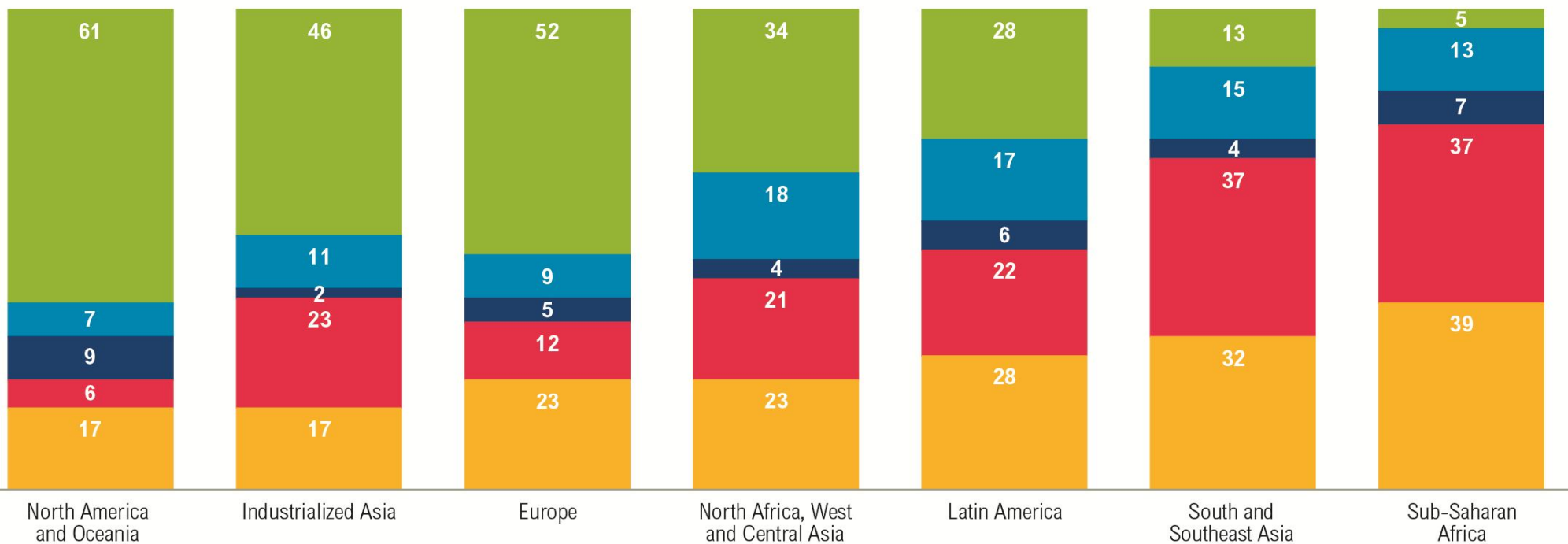
Roughly **1/3** of food produced for human consumption gets **lost or wasted** **1.3 billion tons** per year

(FAO 2011, Global Food Losses and Food Waste)

Where and at Which stage does Food Loss and Waste occur?

■ Production
 ■ Handling and Storage
 ■ Processing
 ■ Distribution and Market
 ■ Consumption



Share of total food available that is lost or wasted

Brian Lipinski, 2014

Possible approaches for reducing food loss and waste (not exhaustive)

PRODUCTION	HANDLING AND STORAGE	PROCESSING AND PACKAGING	DISTRIBUTION AND MARKET	CONSUMPTION
<i>During or immediately after harvesting on the farm</i>	<i>After produce leaves the farm for handling, storage, and transport</i>	<i>During industrial or domestic processing and/or packaging</i>	<i>During distribution to markets, including losses at wholesale and retail markets</i>	<i>Losses in the home or business of the consumer, including restaurants and caterers</i>
<ul style="list-style-type: none"> • Provide information on how to use unmarketable crops • Improve agriculture extension services • Improve access to infrastructure and markets • Improve harvesting techniques 	<ul style="list-style-type: none"> • Improve storage technologies (e.g., evaporative coolers, storage bags, metal silos, crates) • Introduce low-carbon cold chains • Improve handling • Improve infrastructure (e.g., roads) 	<ul style="list-style-type: none"> • Re-engineer manufacturing processes • Improve supply chain management • Improve packaging to keep food fresher for longer and optimize portion size 	<ul style="list-style-type: none"> • Facilitate increased donation of unsold goods • Provide guidance on food storage and preparation to consumers • Change food date labeling practices • Change in-store promotions 	<ul style="list-style-type: none"> • Conduct consumer education campaigns • Improve consumer cooking skills • Reduce portion sizes • Eat “ugly” produce

Initiatives-many but need to be contextualised to Mauritian context



Combating food waste





Food Recovery Hierarchy

Most Preferred

Source Reduction

Reduce the volume of surplus food generated

Feed Hungry People

Donate extra food to food banks, soup kitchens and shelters

Feed Animals

Divert food scraps to animal feed

Industrial Uses

Provide waste oils for rendering and fuel conversion and food scraps for digestion to recover energy

Composting

Create a nutrient-rich soil amendment

Landfill/ Incineration

Last resort to disposal

Least Preferred

Outcome Of the expert working session

Concrete set of actions that can be undertaken by the different sectors

COLLABORATION : KEY PILLAR OF THE INITIATIVE

- Faculty will work together with stakeholders in the food supply chain: farmers, food manufacturers, retailers, agribusiness firms, distributors, food service sectors, researchers, academia, policy makers, entrepreneurs in the public and private sector, consumers, civil society organizations
- Different forms and level of participation:
- Partners /active players who will actively engage in the activities under the Initiative
- Supporters of the Initiative-either through resource sharing, funding of activities, disseminations of activities
- Supporting external communication activities using their own communication channels

COMMUNICATION ABOUT THE INITIATIVE

- Through the website for the Initiative
- <http://sites.uom.ac.mu/foodloss>
- Facebook a/c
<https://m.facebook.com/mauritiusfoodlosswasteintitatives/>
- Through Media

External communication

Under the Community of Practice (FAO Platform)

Postharvest Education Foundation website

WELCOME TO THE POSTHARVEST EDUCATION FOUNDATION



Tweets by @PostharvestOrg



Postharvest Educ Fdn

@PostharvestOrg

fb.me/SNJKOUi9



Feb 25, 20



Postharvest Educ Fdn

@PostharvestOrg

Food Loss and Food Waste Reduction and Recovery Initiative launch!



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[View on Tv](#)

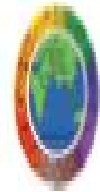
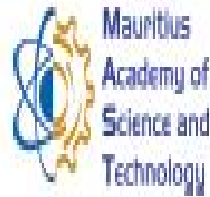
<http://www.postharvest.org/home0.aspx>

Join us in this initiative

Action matters



Value our food



Organising COmmittee

- Associate Professor Daya Goburdhun – Chairperson
- Associate Professor Arvind Ruggoo
- Dr Brinda Ramasawmy
- Mr Shane Hardowar
- Dr Huda Neetoo
- Mrs Amreeta Nivault
- Mr Vinay Baungally
- Mrs Nazmine Jeetoo