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Development Action Plan (DAP)

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36th INTERNATIONAL VEGETABLE TRAINING COURSE

“VEGETABLES: FROM HARVEST TO TABLE”

MODULE 2

Personal Data

- Eman Mohamed Sadeek
- Assistant Researcher
- Food Technology Research Institute, Agricultural Research Center.

➢ Education background

- BSc Food Science & Technology , Faculty of Home Economic.
- MSc Food Industries, Faculty of Agriculture.

➢ Main responsibilities

- Evaluation of fruits, vegetables and its products via chemical, microbiological and sensory analysis
- Sharing in the motherhood and childhood project, which aims to increase food awareness of rural women and sharing internal extension in Food Technology Research Institute.

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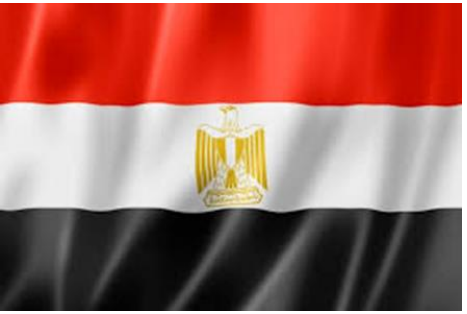

Arab Republic of Egypt

Location	Northern east of Africa Sinai is bridge between Africa and Asia
Surface-area	1 Million Km^2
Capital	Cairo
Population	104 million
Official Language	Arabic
Borders	Libya at the west Sudan at the south Palestine at the northern east Mediterranean Sea at the north Red Sea at the east

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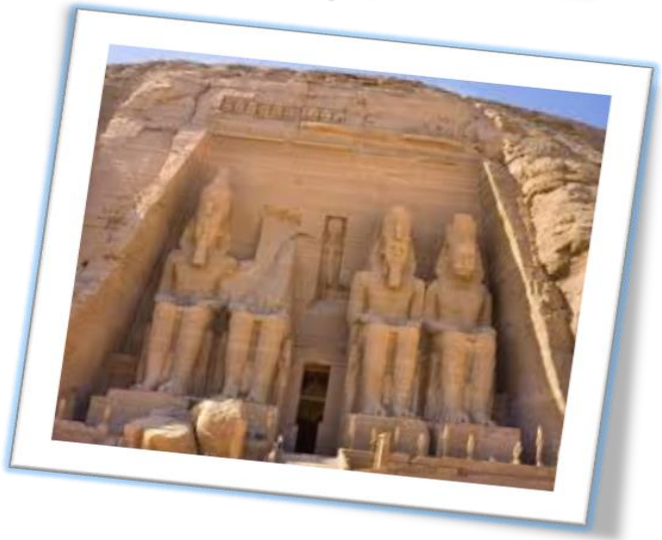
Faiala Temple

Hatshepsut Temple

Pyramids and Sphinx



Abu Sembel Temple

Akhmim Temple

El-Karnak Templete

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Sharm El sheikh

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Our organization

Ministry of Agriculture and Land Reclamation

Agricultural Research Center

Food Technology Research Institute

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" Technological Research Departments "

- Bread & Pasta
- Special Food & Nutrition
- Horticultural Crops
- Crops Technology Research
- Fats & Oils
- Fish & Meat
- Milk & Dairy Products
- Processing Engineer & Packaging

General Administration of food Manufacturing with a main objective of applying the research results and also works on a semi commercial basis :

- Soy bean products
- Balady bread
- Sweet & Pasta
- Dairy products
- Extraction and distillation
- Pickling
- Olive oil Production
- Juices & Jams
- Dehydrated Products

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Three topics in module 2 that I found most useful

- **Fresh cut, water loss, browning & microbial control.**
- **Vegetable Value Chain and Analysis.**
- **Food processing and nutritional quality of vegetables & fruits.**

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Problem
Crop and food manufacturing losses in Egypt

- Egypt is a subtropical country. Its climate mainly suits the production of horticultural crops (fruit and vegetables) which play a very important role in Egypt's agriculture.

- Large quantities of wastes are being left and disposal of these waste materials becomes difficult and pose serious problems, where they are considered a main source of microbial contamination and pollution.

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- Grape , mango , potato , citrus and tomato are the most important fruits and vegetables which grown in Egypt.
- Large quantities of these crops are widely processed to produce many products such as juices , jams , tomato paste, chips and concentrated syrups. They all contain a by-product from which can be recovered different high-added value compounds; among those

(Dietary fiber – Pectin- natural pigments)

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Sources of contamination

Pre-harvest losses

- Climate
- Soil
- Nutrients/fertilisation
- Pests
- Poor farm management
- Selection of varieties
- Etc.

Postharvest losses

- Pests
- Poor crop handling
- Cold chain (absence)
- Lack of infrastructure
- Postharvest management (knowledge!)
- "The market"
- Supply-demand relation
- Etc.

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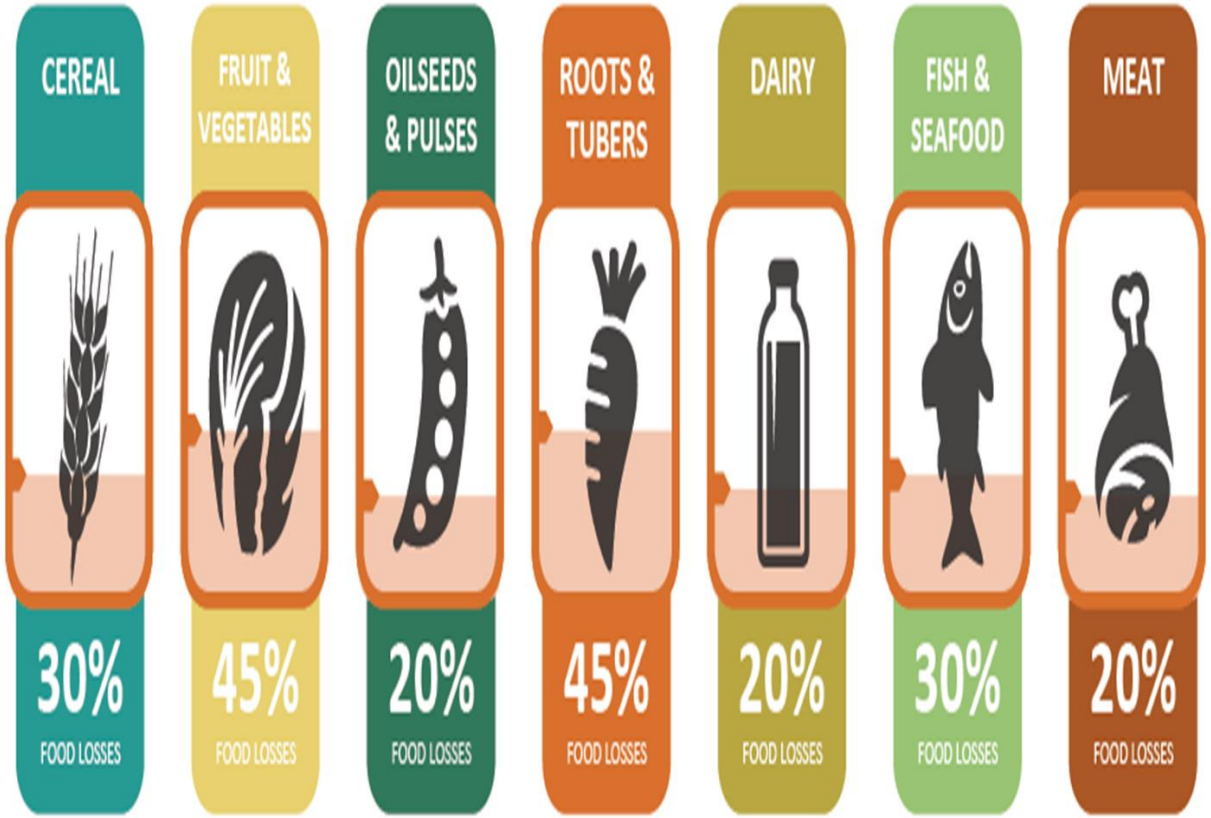
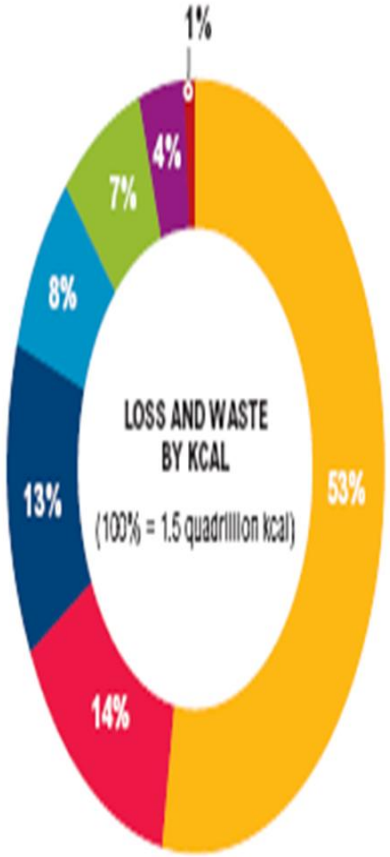
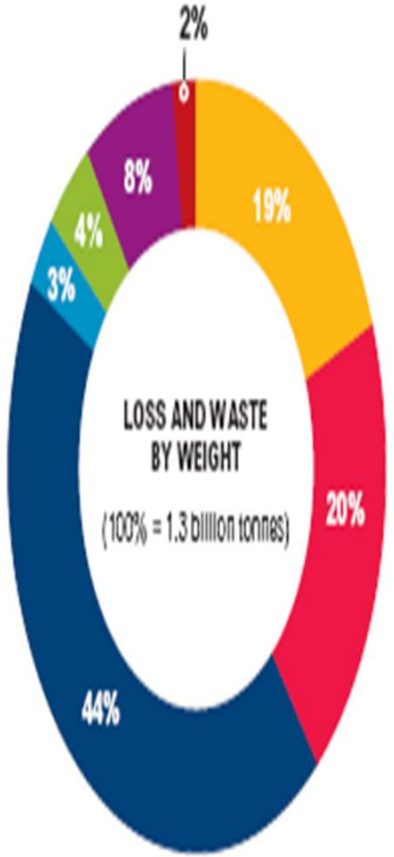
Percentage of losses



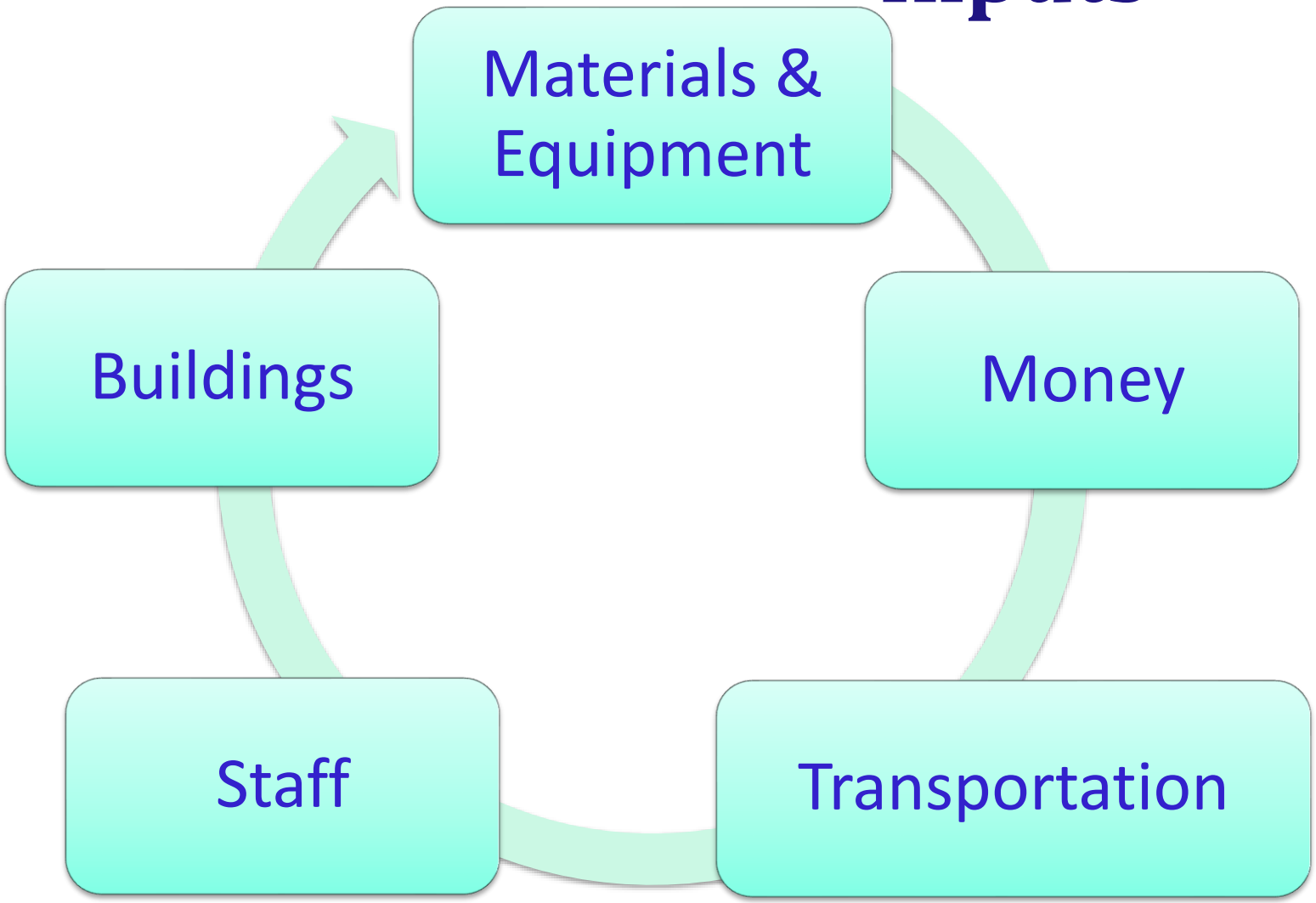




Objectives

- Reduce contamination, pollution and diseases spread.
- Increase production of natural product such as natural pigments.
- Increase utilization of natural component as replacement of artificial components in food manufacturing.

Inputs


Materials & Equipment
Money
Transportation
Staff
Buildings

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Activities

Year	2018-2020
Determination of nutritive value of some selected fruits and vegetable wastes Four varieties (tomato pomace, citrus peel, potato and mango peel).	Per season for each Varity
Extraction & concentration of different component. • pectin from citrus peel • lycopene from tomato pomace • fiber from mango peel	Per season for each Varity

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Total budget

Details	2018-2020
Materials & equipment	140000
staff	70000
Transportation	20000
Minor modifications	20000
Total	250000 EGP

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Project benefits

Reduce contamination and disease spread from crop and food manufacturing wastes.

Increase using natural ingredient in food industries

Increase the production of natural ingredients from the wastes of fruit and vegetable factories

Developing the use of waste from vegetable and fruit during food processing.

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Collaborators

Ministry of agriculture	• Researcher • Chemical analyst
Ministry of industry	• Factories • Quality engineers
Food and drug administration control	• Food and drug administration control

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Challenges

- Cooperation of factories with researchers.
- The budget for laboratory analysis and extraction.

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Thank you