

# **3RD TERM**

## **FOOD STUDY-**

- 1. Cereals**
- 2. Legumes**
- 3. Fruits**
- 4. Vegetables**

# FOOD STUDY

## LEGUMES

Legumes are the edible seeds of leguminous plants eg lentils, peas, soyabeans, groundnuts.

Legumes contain a high percentage of carbohydrates and also contain a fairly good supply of vegetable protein. The protein in legumes are of low biological value. They are rich in thiamine and are a good of iron, they contain very little water. They do not contain Vitamin C eg dry legumes but the fresh green ones are good source of Vitamin C.

Legumes used for food can be grouped into two

1. Pulses
2. Oil seeds

Pulses are the dried edible seeds of cultivated legumes eg peas, beans and lentils.

Oil seeds are those legumes used primarily for their oil content eg groundnut, soyabeans. The oil may be extracted by pressing or by solvent extraction. The residue after extraction is called cake and is a good source of proteins.

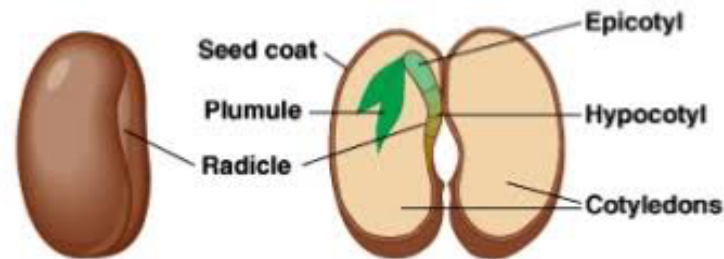
Legumes contain mineral elements such as calcium, phosphorus, iron. They are not easily digested, therefore should be cooked thoroughly to soften the cotyledon. They contain anti-nutritional factors that reduce their utilization in the body eg of the anti-nutritional factors are trypsin inhibitors, urease, saponins. They are removed by heating.

# FACTORS TO CONSIDER WHEN PURCHASING LEGUMES

1. Freshness
2. Free from insects eg weevils
3. Free from moulds

## SEED STRUCTURE

- External
  - Seed coat (*testa*)
  - Hilum
- Embryo
  - Cotyledon
  - Epicotyl /
  - Plumule
  - Radicle



(a) Common bean

# COOKING METHODS OF LEGUME GRAINS



Beans is prepared in a variety of ways and used for breakfast, lunch or supper. They should be thoroughly boiled to get them soft and digestible.

Examples of beans dishes include

1. Beans stew(one pot dish)
2. Fish vegetable beans stew
3. Fried bean cake(akara)
4. Beans pudding (moi-moi)
5. Boiled beans with stew/sauce

# BEANS STEW(One pot dish)

## Recipe:

- 2 cups of beans
- 3 small dried fish
- 3 large fresh pepper 
- 1 cook spoon palm oil
- 2 large tomatoes 
- 1 large onion
- Salt to taste
- 1 cube of Maggi

## Method

1. Wash and boil the beans until they are tender/ soft and water evaporated
2. While beans is on fire, prepare fish, slice onions, grind pepper and tomatoes
3. Fry onion, pepper, tomatoes and fish in hot palm oil
4. Season to taste
5. Add the cooked beans, salt to taste
6. Simmer for about 30minutes or until thickened
7. Served with boiled yam, lap, friend yam, potatoes, plantain.

# **AKARA(Fried Beans Cake)**

## **Recipe:**

- 1 cup beans
- 1 egg
- 2 medium size pepper
- Salt to taste
- 1 medium chopped onion
- Palm oil or groundnut oil for frying

## **Method**

- Soak beans and remove the skin by rubbing or using mortar and pestle
- Grind until smooth
- Put into bowl and beat with a wooden spoon to



incorporate air or cream in motar.

- Add little water at a time
- When the mixture is light, add the chopped onions and pepper, egg and mix thoroughly
- Fry in deep hot oil
- Dropped in spoon full
- Drain well and serve with pap, agidi(corn pudding) or bread and tea.

## **BEANS PUDDING (Moi-moi)**

### **Recipe**

- 2 cups of beans
- 1 large onion

- 3 tablespoon palm oil or groundnut oil
- 2 large pepper and salt to taste
- Hot water for mixing
- 1 Maggi cube
- Fish minced meat or hard boiled egg

## **Method**

- Soak beans and remove skin
- Grind the beans with pepper, onion until smooth
- Prepare leaves or pudding bowl or foil
- Mix the grinded beans, add warm oil and warm water and mix thoroughly
- Add salt and Maggi cube to taste

- You can enrich with hard boiled egg, fish or minced meat
- Wrap with clean leaves, foil or dish into pudding plates and steam
- Serve with hot pap, abidi or rice.

## **NUTRITIVE VALUE OF LEGUMES**

- ✓ Legumes are good source of protein (second class protein)
- ✓ Rich in B-complex Vitamin
- ✓ Fresh green pulses are good source of Vitamin C, but dry one's lack Vitamin C
- ✓ They are not easily digested

✓ They are rich source of mineral elements such as calcium, phosphorus and iron

# FRUITS

Fruits are the sweet and fleshy products of a tree or other parts of a tree that contains seed which can be eaten as food.

## HEALTH BENEFITS OF FRUITS

Fruits benefit the body immensely as they are natural source of Vitamin and minerals which are essential for the proper formation of the body. Fruits help to improve the functioning of the digestive tract.

Fruits are an important part of a healthy diet for this who want to lose weight. They give energy and nearly every nutrient that your body needs to curb weight gain, without adding any unnecessary fat. It helps to stay away from healthy complication like

stroke, high blood pressure, cancer, diabetes and skin disorder.

## **CLASSIFICATION OF FRUITS**

Fruits can be classified into two groups

1. Fresh fruits
2. Dry fruits

Examples of fresh fruits are -

- a) Soft fresh fruits- banana, guava, berries
- b) Hard fresh fruits- apples, pears, plums, melon, mangoes
- c) Citrus fruits- orange, lemon, lime, grape

Examples of dry fruits are

- Figs, apricots, prunes, dates

# **FACTORS TO CONSIDER IN CHOOSING FRUITS**

1. They must be firm to touch
2. They must be fresh
3. They must be free from insects infestation
4. They must not be over ripe
5. Fruits in season are fresh and cheap.

## NUTRITIVE VALUE OF FRUITS

The major nutrient is ascorbic acid. They contain a large amount of Vitamin C. The quality of proteins and fats are small except for olives and pears which are high in fat. The unripe fruits contain carbohydrate.

Fruits are low in iron and calcium. Some acid present in fruits are citric, malic and tartaric acids. Some fruits and vegetables contain Vitamin A in the form of **carotene**.

### **Fresh fruits contain:**

- Water: 85 - 90%
- Proteins: 0.5%
- Carbohydrates: 5.5 - 10.5%



- Cellulose: 2.5%
- Minerals: 0.5%
- Vitamins A, B, C

### **Dry fruits contain:**

- Water: 20%
- Proteins: 4.2%
- Fats: 5.5%
- Cellulose: 5.5%
- Minerals: 2.4%
- Carbohydrates: 65 - 75%
- Vitamin A

## VITAMIN C(ascorbic acid) IN FRUITS

1. Avacado: 18g
2. Pawpaw: 52g
3. Tangerine: 28g
4. Banana: 9g
5. Guava: 326g
6. Cashew: 252g
7. Mango(ripe): 42g
8. Palm fruit: 12g
9. Pineapple: 34g
10. Orange: 46g

## **EFFECTS OF COOKING ON FRUITS**

1. In intensive cooking, the Vitamin C content is completely destroyed
2. The cellulose is softened and the fruit becomes softer and more digestible
3. Cooking destroys bacteria which may be present in the fruit
4. Mineral salts are leached out into the water but are not lost if syrup made from the cooking water is served with the fruit.

# **PREPARATION OF FRUITS**

## **RAW FRUITS**

Fruits can be served raw. The nutrients in fruits are retained when served raw.

## **COOKED FRUITS**

Some fruits are cooked for palatability, to soften cellulose and to improve their starch content.

## **BAKED FRUITS**

Fruits can be baked with other ingredients. It can be baked separately and consumed as snacks or desert or accompaniment.

## **STEWES FRUITS**

Fruits can be stored in water or in sugar syrup.

# METHOD OF SERVING FRUITS

## ●FRUIT SALAD

### Recipe:

Fresh fruits

Water melon, pineapple, pawpaw, banana, mango, orange and either sugar syrup or honey.

### Method:

To prepare syrup, dissolve the sugar in the water and boil for five minutes. Do not allow to colour.

To prepare fruits-

- ✓ Wash fruits, remove skin and seeds
- ✓ Cut up into small neat pieces and put in a bowl
- ✓ Pour hot syrup over the diced fruit

- ✓ Stir gently and leave it covered until cold, then chill if necessary
- ✓ Arrange in a glass dish, paying attention to the colour scheme
- ✓ Serve with milk or cream.

## ●FRUIT FOOL(mango fool)

### Recipe:

4-5 ripe mangoes

\*\*\* sugar

1 cup of water

½ cup undiluted evaporated milk

¼ milk and 1 egg for custard

### Method:

- ✓ Wash, peel and cut mangoes

- ✓ Prepare syrup
- ✓ Stew mango in the syrup to make a pulp
- ✓ Sieve and beat well
- ✓ Heat the milk and pour it on the lightly beaten egg to prepare the custard
- ✓ Cool custard and mix the mango p\*\*\*\* and evaporated milk
- ✓ Chill in a refrigerator if desired
- ✓ Serve in individual glasses

Banana, pawpaw, water melon, can be used in preparing fool

# ●PINEAPPLE DRINK

## Recipe:

Pineapple, water, sugar or date fruit, flavour.

## Method:

- ✓ Wash and peel the pineapple
- ✓ Slice and blend \*\*\*\* sieve the pineapple
- ✓ Boil the pineapple, peel and allow to cool, sieve
- ✓ Add the pineapple liquid, liquid from pineapple peel, sugar, water and flavour
- ✓ Serve chilled



# VEGETABLES

Vegetables are plants or parts of plant cultivated for food, that is the edible parts of a plant. Vegetables are important for the essential minerals and vitamins they contain, for roughages, for flavouring and for colouring they add to the diet.

Vegetables can be served as an accompaniment to a dinner or as separate course, they may be used in salads and in vegetarian cookery.

Vegetables may be classified according to the parts of the plant used for food and according to NUTRITIVE value. Vegetables and parts of vegetables vary in NUTRITIVE value.

# CLASSES OF VEGETABLES

Parts of plants used as vegetables include

1. Root- eg carrots, parsnips, turnips
2. Bulbs- eg onion, garlic, shallots
3. Tubers- eg potato, yam, cocoyam, cassava
4. Stem- celery, leek
5. Flower- cauliflower, broccoli
6. Leaves- spinach, cabbage, lettuce, pumpkin, sprout, water leaves, bitter leaves
7. Fruits- tomatoes, beans, cucumber, garden egg, pepper.

## NUTRITIVE VALUE OF VEGETABLES

Vegetables are eaten in variety of ways as part of main meal and as snacks. The nutrient content of different types of varies considerably with the exception of pulses. Vegetables provide little proteins and fats.

Vegetables contain water soluble vitamin like Vitamin B and C

Fat soluble vitamins including Vitamin A and D as well as carbohydrates and minerals.

Root vegetables contain starch or sugar for energy, a small amount of protein, some mineral salt and Vitamin. They are good source of crude fibre, cellulose and water. Green vegetables are rich in mineral salts and vitamins, particularly vitamin C and carotene.

The greener the leaf, the larger the quantity of

vitamin present. The chief mineral salt are calcium, iron.

## **FACTORS TO CONSIDER WHEN PURCHASING VEGETABLES**

Root vegetables must be

- Clean, free from soil
- Smooth, unwrinkled and firm
- Free from blemishes
- Free from signs of decay
- Be of an even size and shape
- Free from bruises caused by cuts or spades

Leafy vegetables must be

- Attractive and look crisp and fresh
- Must not drop when the bunch is shaken
- Free from insects
- Snap sharply when broken across eg cocoyam, okro
- Must not be over ripe

## **GUIDELINES FOR THE STORAGE OF VEGETABLE**

- ✓ Store vegetables in a cool-dry and well ventilated room
- ✓ Remove root vegetables from their sacks and store in bins or racks
- ✓ Store frozen vegetables at 18°C or below
- ✓ The fresher the vegetables the better their flavour

so they should not be stored at all if possible

- ✓ Green vegetables lose vitamin C if they are stored for too long or overcooked
- ✓ Thaw out frozen vegetables correctly and never refreeze them once they have thawed out.

## **COOKING METHODS FOR VEGETABLES**

Vegetables can be-

Boiled, steamed, stewed, fried and baked

## **FRENCH FRIED ONIONS**

**Recipe:**

Onion- 1 ball(medium)

Flour- 2 tablespoons

Milk-  $\frac{1}{4}$  cup

Seasoning- as desired or to taste

**Method:**

1. Peel and wash the onion
2. Cut into 2mm slices against the grain
3. Separate into rings
4. Pass through milk and seasoned flour
5. Shake off the surplus
6. Deep fry in hot oil
7. Drain well on kitchen paper
8. Serve as appetizer

# VEGETABLE MOULS(mousse)

## Recipe:

3-4 eggs

400g (2cups) seasoned vegetable puree

Doubled cream(milk? cup

## Method:

1. Thoroughly mix the egg without over-beating
2. Pass them through a fine strainer on top of cold vegetable puree, add the cream and combine thoroughly
3. Three quarter fill the buttered moulds during cooking to allow for expansion
4. Place the mould in a bain-marie of hot water and bake at 190°C until set. It can be steamed
5. Remove from oven and allow to stand for 10minutes



before turning out

## **POTATO PANCAKE**

### **Recipe:**

Cooked mashed potato 450g(2cups)

Plain flour 50g (1spoon)

2 eggs

Brear crumbs 200g (1½ cup)

### **Method:**

- Mix the potato puree and flour well
- Divide into flour and more
- Flour, dip in egg and coat with bread crumbs
- Shallow fry
- Serve with any fruit drink or juice.