





# Recipe Book Zambian Traditional Foods

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Recipe Book On Traditional Zambian Foods
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#### **FOREWORD**

Zambian indigenous foods contain high levels of essential nutrients such as proteins, carbohydrates, minerals and vitamins which can benefit the low income population groups. However, incorporation of such foods in Zambian diets has been diminishing.

Modern Zambian diets are highly exotic; with the young generation giving less value to indigenous foods. It is against this background that the Department of Agriculture has taken this initiative to document the utilisation of these foods in order to sensitize communities on their goodness.

Unlike other recipe books on the Zambian market, this book targets low income groups in rural, peri-urban and urban areas focusing on the promotion of locally grown indigenous foods. This is of primary importance since most low income groups have monotonous diets because of limited resources on the one hand and lack of time to prepare nutritious and wholesome meals on the other.

The recipe book uses basic equipment, local ingredients, and simple English for the purpose of capturing a wider range of people. The book also gives relevant information on basic nutrition, the linkage between HIV/AIDS and nutrition as well as information on infant and young child feeding. It can also be used as a teaching aid for nutrition demonstrators, health workers, agricultural extension staff, community development workers and other change agents in communities.

I am hopeful that this recipe book will be a valuable tool in the hands of mothers and the entire family during preparation of various kinds of diets in both rural and urban settings.

> Mary M. Chipili (Mrs.) Director of Agriculture

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Many thanks go to Infant and Young Child Feeding Nutrition (IYCN) Project for financially supporting the editing of the book and pre-testing of the recipes. Special thanks go to the IYCN Director, Dr. Catherine Mukuka and Programmes Officer, Ms. Josephine Nyambe, for their technical guidance and material support.

Recognition is made of staff from the Department of Agriculture for their efforts in collecting the raw data, editing and pre-testing the recipes thereby making them acceptable for consumption.

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#### BACKGROUND

This edition is a follow up to the first edition called "Recipe Book on Zambian Traditional Foods" published by the Department of Field Services of the Ministry of Agriculture, Food and Fisheries (2000).

Zambia has a lot of indigenous foods which form a whole array of recipes that are undocumented. These are gradually running the risk of being lost due to the mistaken perception that indigenous foods are of inferior quality and fit only for

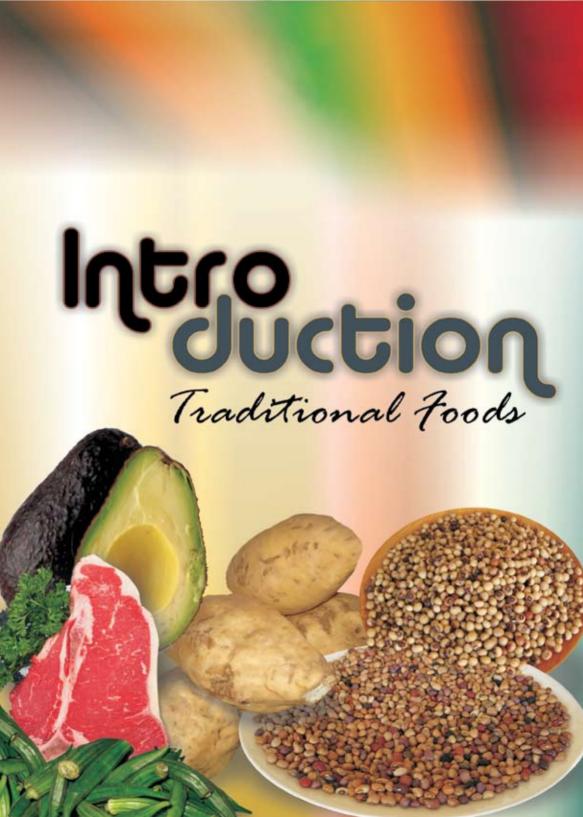
the elderly and the low class people in society.

A number of recipe books have been produced in the past and are in use. In 2006, a research was undertaken by the Department of Agriculture in the Ministry of Agriculture and Cooperatives through the Food and Nutrition Section in four provinces in Zambia—namely Southern, Western, Lusaka and Central. The research targeted low income groups aimed at collecting data on traditional methods of cooking foods. The recipes were recorded in local languages, mainly Tonga, Lozi, Soli and Lenje. Subsequently, a recipe development workshop was held in 2007 to translate the traditional recipes into English in order to make them more accessible to a wider populace.

During the workshop gaps were identified including lack of recipes and documentation of foods prepared from indigenous foods especially for use in rural areas. This is despite the fact that most of these foods are locally and readily available, affordable and highly nutritious. This recipe book seeks to serve as a nutrition education tool in households and schools providing guidance in the provision of healthy diets to families and individuals. In its simplicity, it

outlines a diversity of traditional recipes.

The book contains 46 recipes recorded through collaborative efforts with key stakeholders. These include farmers, community based organizations, nongovernmental organizations and staff from the Ministry of Agriculture and Cooperatives, at national, provincial and district levels. Recognition is made of local names as well as scientific names where available (Appendix 10.2).

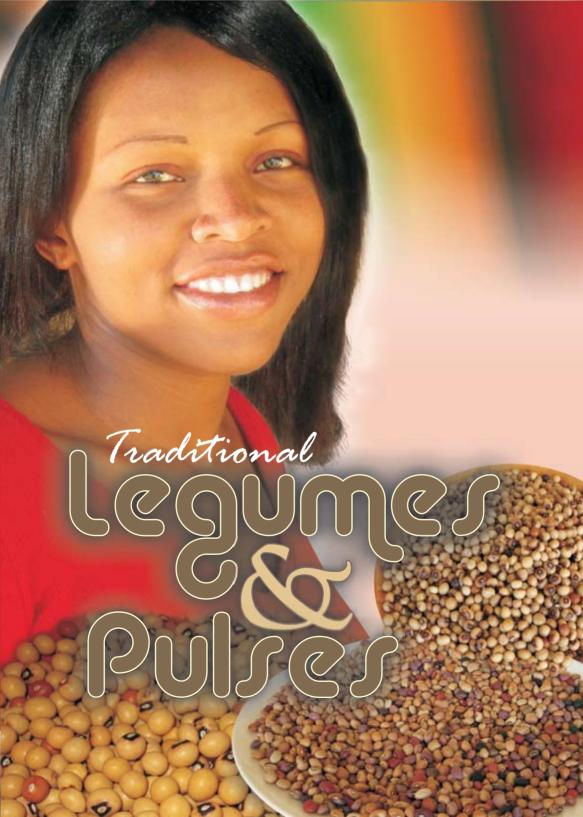


1.0 he recipes in this book are standardised in terms of the local names to reflect their origin. Ingredients are listed in ascending order of quantities using common household measures. The recipes are also modified to conform to hygienic standards while ensuring maximum retention of nutrients. In addition the recipes were evaluated for consumer acceptability. The recipes are presented in the order given below based on the main ingredients used:

- 1. Legumes and Pulses
- 2. Vegetables
- 3. Root and Tuber
- 4. Meat and Fish
- 5. Cereals and Grains
- 6. Fruits and Beverages

The recipes in this publication provide nutritious meals for the enjoyment of different conditions and age groups such as pregnant and lactating mothers, infants and young children including people living with HIV/AIDS.

The recipes are formulated from locally available ingredients; making nutritious, easy to prepare and affordable meals. They are standardised in terms of the local names to reflect their origin.



## **MUSUNKWINDI**

(Cucurbit seed snack)

#### **INGREDIENTS**

1 cup dried curcubit seed 1 tablespoon water Salt to taste

#### **METHOD**

- Select good seeds and wash in cold water
- Roast the seed until light brown
- Add salt and water
- Continue roasting until dry
- Place on a plate to cool
- Put the cooled seeds in a mortar and pound to a smooth paste
- Serve as a snack

#### **Nutrition information**

Rich in minerals especially Zinc and Selenium.

## 2.2 BUNYANGU RELISH (Pounded cowpea relish)

#### **INGREDIENTS**

1 cup cowpea grits
½ cup pounded groundnuts
1 tomato
1 onion
3 cups water
Salt to taste



#### **METHOD**

- 1. Put the water in a pot and boil it
- 2. Add the cowpea grits and boil for 10-15 minutes
- 3. Add groundnuts and cook for another 5-10 minutes
- 4. Chop tomato and onion
- 5. Add the chopped tomato and onion to the cowpea grits in the pot
- 6. Cook for another 5 minutes
- 7. Serve as relish

### **Nutrition information**

Rich in protein, vitamins and minerals. Good for children between 9 to 24 months.



## 2.3 BAMBARA NUTS RELISH



#### **INGREDIENTS**

3 cups fresh bambara nuts (or cowpeas)

2 tomatoes

1 onion

2 tablespoons cooking oil

2 cloves of garlic

3 cups water

Salt to taste

#### **METHOD**

- Wash the bambara nuts
- Boil bambara nuts in water until soft but do not over cook
- Add cooking oil
- Add chopped tomatoes and onions
- Add salt and cook for 10-15 minutes.
- Serve as relish

### NOTE:

Cowpeas can be used in place of Bambara nuts.

#### **Nutrition information**

Rich in protein and vitamins.

## 2.4 MUSUKA (Roasted Groundnuts)

#### **INGREDIENTS**

2 cups groundnuts 1 tablespoon water ½ teaspoon salt

#### **METHOD**

- 1. Select good whole groundnuts
- 2. Roast groundnuts in a frying pan on low heat, turning them continuously
- 3. Dissolve salt in water and pour on the groundnuts
- 4. Continue roasting until dry
- 5. Serve as a snack



### **Nutrition information**

Rich in protein and energy.



## 2.5 GROUNDNUT SNACKS



#### **INGREDIENTS**

2 cups dried groundnuts **Enough water** Salt to taste

#### **METHOD**

- 1. Wash the groundnuts and place in a medium sized pot
- 2. Add water and salt
- 3. Boil for 40 minutes to 1 hour
- 4. Drain the water
- 5. Serve as a snack



#### **Nutrition information**

Rich in energy and protein. Good snack for school going children

## 2.6 BWEENGO RELISH

(Sesame relish)

#### **INGREDIENTS**

1 cup Sesame seed Salt to taste

#### **METHOD**

- 1. Select good whole sesame seed
- 2. Place the sesame seeds on a frying pan and roast on low heat to a light brown
- 3. Pound the roasted sesame to a paste and add salt
- 4. Serve as a relish

### **Nutrition information**

Rich in protein and minerals especially zinc and selenium



### 2.7 BAMBARA MILK



#### **INGREDIENTS**

2 cups wet treated Bambara nuts.2 cups water1 teaspoon sugarSalt to taste

#### **METHOD**

- 1. Pound the Bambara nuts into a paste
- 2. Put the pounded Bambara nuts into a bowl and then add water
- 3. Squeeze the Bambara nuts through a clean mutton cloth to obtain Bambara milk
- 4. Add sugar and salt to the Bambara milk
- 5. Boil the Bambara milk for 10 minutes
- 6. Cool the Bambara milk
- 7. Pour the Bambara milk in a jar
- 8. Serve as a beverage



#### **Nutrition information**

Provides proteins, vitamins and minerals.

## 2.8 BAMBARA SAUSAGES

#### **INGREDIENTS**

2 cups wet treated Bambara nuts

1 onion

1 tomato

1 teaspoon curry

½ cup wheat or cassava flour.

½ cup cooking oil.

½ cup water

Salt to taste.





#### **METHOD**

- 1. Pound the treated Bambara nuts to a fine paste
- 2. Chop ½ of the onion.
- 3. Add curry, salt and chopped ½ onion to the paste and continue pounding
- 4. Add flour. The flour serves to bind the mixture together.
- 5. Roll the mixture into sausage shapes and fry until golden brown
- 6. Chop the remaining ½ onion and tomato.
- 7. Fry the chopped onion and tomato on a little cooking oil to make gravy
- 8. Add the gravy to the sausages
- 9. Add about ½ cup water and simmer for 10-15 minutes
- 10. Serve as relish

#### **NOTE:**

These sausages can also be made from soya beans and cowpeas.

#### **Nutrition information**

Rich in protein and minerals and carbohydrates.



## 2.9 ROASTED PUMPKIN SEEDS



#### **INGREDIENTS**

1 cup dried pumpkin seeds Salt to taste



#### **METHOD**

- Select and wash good pumpkin seeds
- Roast the selected good pumpkin seeds on a frying pan until light brown.
- Dissolve salt in water add to the pumpkin seeds on the frying pan
- 4. Continue to roast until dry
- 5. Serve as a snack or relish

#### **Nutrition information**

Rich in protein, vitamins and minerals especially zinc and selenium.

# 2.10 PUMPKIN SEED MINCEBALLS

#### **INGREDIENTS**

2 cups pumpkin seeds

1 cup water

1 onion

1 tomato

2 tablespoons cooking oil

Salt to taste

#### **METHOD**

- 1. Select good pumpkin seeds and wash them thoroughly
- 2. Pound the seeds in a mortar until finely mashed
- 3. Chop ½ onion
- 4. Add salt and the ½ onion to the mashed pumpkin seeds and continue pounding
- 5. Squeeze out the oil with hands and make into balls
- 6. Boil the mince balls until cooked
- 7. Chop the remaining ½ onion and tomato
- 8. Fry the ½ chopped onion with tomato and add to the mince balls
- 9. Cook until the tomatoes and onions are done
- 10. Serve as relish

### **Nutrition information**

Rich in energy, proteins, vitamins and minerals.



## 2.11 SOYA MASH RELISH



#### **INGREDIENTS**

1 cup soya beans 2 eggs

2 green peppers

2 tomatoes

1 onion

2 tablespoons cooking oil

Salt to taste

#### **METHOD**

- 1. Pound the boiled soya beans into a mash
- 2. Put the soya mash on a frying pan
- 3. Place the frying pan on heat while turning continuously until the water dries out
- Add cooking oil and continue frying until light brown
- 5. Chop tomatoes, onion and green pepper,
- 6. Add salt, chopped tomatoes, onion and green pepper to the fried soya beans
- 7. Cook for about 5 minutes
- 8. Break the egg in a cup to make sure that it is fresh.
- 9. Add the egg to the soya bean mixture and stir well
- 10. Serve as a relish

#### **Nutrition information**

Rich in proteins and vitamins.

### 2.12 SOYA FRITTERS

#### **INGREDIENTS**

2 cups boiled soya beans

2 eggs

1 cup wheat flour

1 cup chopped cabbage

2 tablespoons sugar

2 onions

1 cup cooking oil

2 tablespoons water

#### **METHOD**

- 1. Pound boiled soya beans and set aside
- 2. Cook chopped cabbage in 2 tablespoons water for 5 minutes, stirring continuously
- 3. Chop onion
- 4. Mix soya mash, cooked cabbage and chopped onions
- 5. Break the eggs in a cup to make sure that they are fresh
- 6. Add the eggs and flour to the mixture. Mix well together
- 7. Shape as desired
- 8. Fry in hot oil
- 9. Serve as a snack

#### **Nutrition information**

Rich in energy, proteins and vitamins.



## 2.13 GROUNDNUT BISCUITS



#### **INGREDIENTS**

1 cup wheat flour

2 tablespoons pounded groundnuts

1 egg

1 teaspoon baking powder

1 tablespoon oil

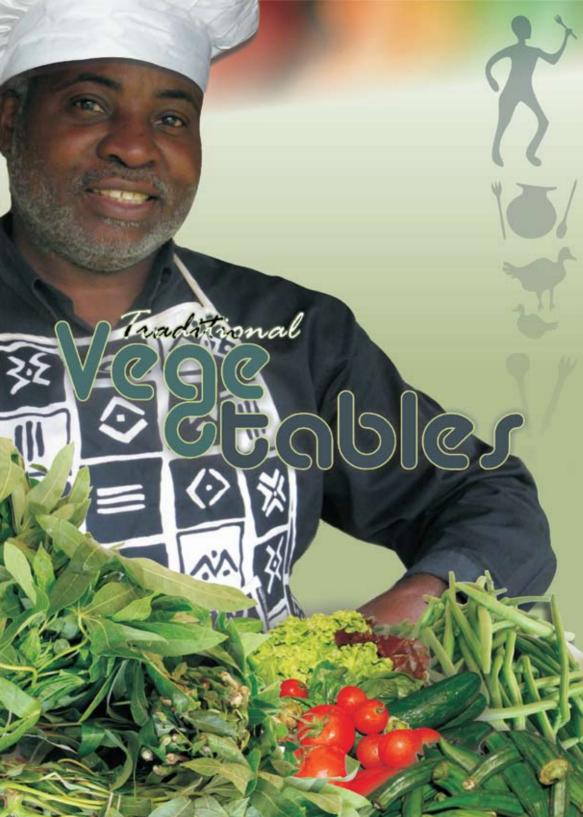
1 teaspoon sugar

Salt to taste

#### **METHOD**

- Sieve flour and baking powder into a bowl
- Add, salt, sugar and groundnuts
- Rub-in oil into the mixture to a bread crumb texture
- Break the egg into a cup and beat it
- Put the beaten egg into the flour mixture and make a dough
- Roll out the mixture and make shapes as desired
- 7. Place the shaped shapes on a baking sheet
- 8. Bake in hot oven for 10-15 minutes
- 9. Serve as a snack

## **Nutrition information**



## 3.1 COWPEA RELISH



#### **INGREDIENTS**

2 handful immature fresh cowpea pods

2 tomatoes

1 onion

½ cup water

2 teaspoons cooking oil

Salt to taste



#### **METHOD**

- 1. Wash the cowpea pods in clean water
- 2. Cut the cowpea pods into pieces
- 3. Put the water in a medium pot and place on heat to boil
- 4. Put the cowpea pods and add cooking oil Let it cook for 5 minutes
- 5. Chop onion and tomatoes
- 6. Add salt, chopped onion and tomato
- 7. Cook again for 5-10 minutes

8. Serve with nshima or rice



#### **Nutrition information**

Rich in proteins and vitamins and minerals.

## 3.2 IMPWA IN BAMBARA MILK

#### **INGREDIENTS**

2 cups impwa

2 cups Bambara milk\*

2 tomatoes

1 onion

2 tablespoons cooking oil

2 cups hot water

Salt to taste



#### **METHOD**

- 1. Wash the impwa and boil for 10 minutes
- 2. Cool the impwa and remove the skin
- 3. Cut impwa into small pieces
- 4. Place a medium size pot on heat
- 5. Chop tomato and onion
- 6. Put impwa in the pot
- 7. Add Bambara milk, cooking oil, salt, chopped tomato and onion
- 8. Cook for 10-15 minutes
- 9. Serve as soup or relish

#### **NOTE:**

\*For preparation of Bambara milk refer to Recipe no.7 under Legumes



#### **Nutrition information**

Rich in proteins, vitamins and minerals.



### 3.3 MUNDYOLI RELISH

(Pounded dried pumpkin leaves)

#### **INGREDIENTS**

½ cup dried pumpkin leaves 1 cup whole groundnuts 5 pieces of dried okra 3 cups water Salt to taste

#### **METHOD**

- Pound pumpkin leaves, groundnuts and dried okra together
- 2. Sieve the mixture to obtain a powder
- 3. Retain what remains on the sieve and repeat step 2
- 4. Put the powder in a pot
- 5. Add cold water and stir to a smooth paste
- 6. Add salt and cook slowly, stir occasionally until a layer of fat appears on top
- 7. Serve as relish



#### **Nutrition information**

Rich in proteins energy, vitamins and minerals.

## 3.4 MBUMBUMENE (Whole okra)

#### **INGREDIENTS**

10 fresh tender okra fingers 1 cup water Salt to taste



- 1. Wash okra and cut off the head and stalk end
- 2. Put in a small pot and add salt and water
- 3. Boil for 5-10 minutes
- 4. Serve with nshima or eat as a snack



### **Nutrition information**

Rich in vitamins and minerals.



## 3.5 CHAMUDDONGA (Wild Spinach)



3 handfuls chamuddonga leaves

1 tablespoon cooking oil or ½ cup pounded groundnuts

1 medium tomato

1 medium onion

Salt to taste

#### **METHOD**

- 1. Sort and wash the chamuddonga leaves
- 2. Cut the leaves into pieces
- 3. Put in a small pot
- 4. Add cooking oil or groundnuts,
- Chop tomatoes, onion and add to the chamuddonga
- 6. Add salt and cook for 20 minutes
- 7. Serve as a relish

#### **Nutrition information**

Rich in proteins, energy, vitamins and minerals.



# 3.6 KAYUNIYUNI (Wild Cat Whiskers)

#### **INGREDIENTS**

1 handful *kayuniyuni* leaves 1 medium tomato 1 medium onion 1 table spoon cooking oil or ½ cup pounded groundnuts Salt to taste

#### **METHOD**

- 1. Sort and wash kayuniyuni leaves
- 2. Cut the leaves into pieces and put in a small pot
- 3. Add salt and boil for 20-30 minutes
- 4. Chop tomatoes and onion
- 5. Add chopped tomatoes and onion to the boiling *kayuniyuni*
- 6. Cook for 5 minutes
- 7. Add cooking oil or pounded groundnuts
- 8. Boil for another 10 minutes or until groundnuts are cooked.
- 9. Serve as a relish

#### **Nutrition information**

Rich in proteins, energy, vitamins and minerals.





# 3.7 SISHUNGWA (LUBANGA) IN GROUNDNUTS

#### **INGREDIENTS**

2 handfuls fresh sishungwa 2 tomatoes 1 onion 1 cup pounded groundnuts Salt to taste

#### **METHOD**

- 1. Wash sishungwa leaves thoroughly
- 2. Cut the leaves into small pieces
- 3. Put the leaves in a pot and boil for 20-30 minutes
  - 4. Chop tomatoes and onion
- 5. Add the chopped tomatoes and onion to the boiling *sishungwa* leaves
- Add salt and the pounded groundnuts and continue to cook
- 7. Stir occasionally for 15-20 minutes.

#### **Nutrition information**

Rich in energy, proteins, vitamins and minerals.

# 3.8 MAKONDOLE RELISH (Dried pumpkin pieces)

#### **INGREDIENTS**

2 cups dried pumpkin pieces

1 cup pounded groundnuts4 cups water1 medium tomato1 medium onionSalt to taste



- Break the dried pumpkin into small pieces
- 2. Soak in warm water for 5-10 minutes
- 3. Wash the pumpkin pieces and put in a medium sized pot
- 4. Add water and boil for 20-30 minutes
- 5. Chop tomatoes and onion
- 6. Add salt, pounded groundnuts, chopped tomatoes, onions and stir to mix well
- 7. Cook for 10-15 minutes
- 8. Serve as a relish.

### **Nutrition information**

Rich in proteins, vitamins and minerals.



## 3.9 MUNTUBWI RELISH (Fresh cucumber pieces)

#### **INGREDIENTS**

10 fresh cucumbers
1 cup pounded groundnuts
4 cups water
1 medium tomato
1 medium onion
Salt to taste

#### **METHOD**

- 1. Wash, peel, slice and remove the cucumber seeds
- 2. Put in a medium pot and add water
- 3. Boil for 10–15 minutes
- 4. Chop tomato and onion
- 5. Add salt, chopped tomato and onion
- 6. Add pounded groundnuts and mix well.
- 7. Cook for 10–15 minutes
- 8. Serve as a relish.

#### **Nutrition information**

Rich in proteins, energy, vitamins and minerals.

## 3.10 KANUNKHA (Black jack)

#### **INGREDIENTS**

4 handfuls black jack leaves 1 cup pounded groundnuts 1 cup water 2 tomatoes 1 onion Salt to taste

#### **METHOD**

- 1. Sort and wash black jack leaves
- 1. Cut the leaves, put in a small pot and add water.
- 2. Cook for 10 minutes.
- 3. Add pounded groundnuts and salt.
- 4. Chop tomatoes and onion
- 5. Add chopped tomatoes and onion
- 6. Cook for 30 minutes while stirring occasionally
- 7. Serve as relish.

#### **Nutrition information**

Provides energy, proteins, vitamins and minerals.



## 3.11 MUSHROOM IN IMPWA



#### **INGREDIENTS**

2 cups fresh mushroom\*
2 cups impwa
1 tomato
1 onion
½ cup cooking oil
Salt to taste



#### **METHOD**

- 1. Wash mushroom and impwa separately
- 2. Chop the mushroom and put in a pot
- 3. Add water and boil the mushroom for 10-15 minutes
- 4. Chop tomato, onion and add to the mushroom
- 5. Cook for 10 minutes
- 6. Chop the *impwa* and add to the cooking mushrooms
- Add cooking oil and continue cooking until the *impwa* is cooked
- 8. Serve as relish



#### **NOTE:**

\*Hard types of mushroo<mark>ms such as Busefwe and</mark> Chitondo are suitable fo<mark>r this re</mark>cipe

#### **Nutrition information**

Rich in vitamins and minerals.

## 3.12 CHIPWATANGA (Pumpkin porridge)

#### **INGREDIENTS**

1 cup pounded groundnuts
2 cups water

Salt to taste Sugar (optional)



- 1. Wash and peel the pumpkin
- 2. Cut the pumpkin into pieces
- 3. Put in a pot and add water
- 4. Cook until soft
- 5. Add groundnuts, salt and mix well
- 6. Simmer for 10–15 minutes
- 7. Serve for breakfast or as a snack



#### **Nutrition information**

Rich in proteins and vitamins. Suitable for children above six months of age

## 3.13 NKHOTO YA MTETEKA (Sour porridge)

#### **INGREDIENTS**

4 cups sour water
1½ cups pounded groundnuts
1 cup mealie meal
2 tablespoons sugar

#### **METHOD**

- 1. Put the sour water into a pot and place on heat
- 2. Warm the sour water, stir in the mealie meal slowly
- 3. Boil for 5-6 minutes
- 4. Add groundnuts and sugar
- 5. Simmer for 15 minutes, stirring occasionally
- 6. Serve for breakfast meal or afternoon snack

#### Preparation of sour water

1 cup samp or mealie meal 5 cups water

- Soak samp or mealie meal in water for 3 days\*
- Slowly drain the fermented water into a another container in readiness for cooking porridge

#### **NOTE:**

\*Other dehulled cereals such as sorghum and millet can replace samp or mealie meal.

#### **Nutrition information**

Rich in energy and proteins.

# 3.14 MANKOLOBWE IN GROUNDNUT SAUCE

(Local cucumber)

#### **INGREDIENTS**

1 cup dried *mankolobwe*1 cup lightly roasted groundnuts
2 cups water
2 tomatoes
1 teaspoon soda
Salt to taste



#### **METHOD**

- 1. Soak the mankolobwe in cold water for 5-10 minutes
- 2. Thoroughly wash the mankolobwe
- 3. Put the mankolobwe in a pot and add water
- 4. Boil the mankolobwe until soft
- 5. Lightly pound the roasted groundnuts and winnow to remove the skin
- 6. Pound the groundnuts and sieve. Place the groundnut flour into a mortar and pound to a smooth paste
- 7. Put the groundnut paste into a cup and add ¼ cup water. Stir to obtain a light consistency
- 8. Pour into the boiling *mankolobwe* and stir well
- 9. Chop the tomatoes
- 10. Add salt, soda and chopped tomatoes to the *mankolobwe*
- 11. Simmer for 10–15 minutes
- 12. Serve as relish

#### **Nutrition information**

Rich in energy, proteins and vitamins.



# 3.15 SOLOLO IN GROUNDNUT SAUCE



#### **INGREDIENTS**

3 handfuls fresh sololo
1 cup pounded groundnuts
2 medium sized tomatoes
¼ tea spoon soda
Salt to taste

#### **METHOD**

- Wash the sololo leaves thoroughly and cut them
- 2. Put the cut leaves in a pot and add water
- 3. Cook for 3 minutes whilst stirring
- 4. Add soda and continue stirring
- 5. Chop the tomatoes and add to the sololo
- 6. Add pounded groundnuts and salt
- 7. Cook for 15 minutes
- 8. Serve as relish

#### **Nutrition information**

Rich in energy, proteins, vitamins and minerals.

# 3.16 MANGAMBWA MWA LITOZE ZA MUNDALANGWE

(Pumpkin leaves in pumpkin Seeds)

#### **INGREDIENTS**

3 handfuls pumpkin leaves1 cup pumpkin seeds2 tomatoes1 onionSalt to taste



#### **METHOD**

- 1. De-rib, wash and cut pumpkin leaves
- 2. Cook the pumpkin leaves for 10-15 minutes
- 3. Roast the pumpkin seeds on a frying pan for a few minutes
- 4. Pound the seeds and sieve to obtain a powder
- 5. Chop tomatoes and onion
- 6. Add salt, pumpkin seed powder, chopped tomatoes and onion to the pumpkin leaves
- 7. Cook for 15 minutes
- 8. Serve as relish



#### **Nutrition information**

Rich in energy, proteins, vitamins and minerals especially zinc and selenium.



## 3.17 SWEET POTATO LEAVES IN MUNGONGO SAUCE

#### **INGREDIENTS**

2 handfuls sweet potato Leaves

4 cups mungongo seeds

2 tomatoes

1 cup water

1 small onion

Salt to taste

#### **METHOD**

- 1. Crush the *mungongo* seed to remove the white nuts
- 2. Pound the nuts to a smooth paste
- 3. Wash the sweet potato leaves and put them in a pot
- 4. Add water and cook for 3-5 minutes
- Put the mungogo paste in a cup and add a little water to make a light consistency
- 6. Chop tomatoes and onion
- 7. Pour the *mungogo* paste into the sweet potato leaves
- 8. Add salt, chopped tomatoes and onion
- 9. Cook for 10-15 minutes
- 10. Serve as relish

#### **Nutrition information**

Rich in proteins, energy, vitamins and minerals.

## 3.18 CHISOPE (Dried wild okra)

#### **INGREDIENTS**

1 handful *chisope*½ cup water
1 teaspoon soda
2 tomatoes
Salt to taste

#### **METHOD**

- 1. Select and wash the chisope
- 2. Put water in a pot and heat,
- 3. Chop tomatoes
- 4. Add salt, soda and chopped tomatoes to the boiling water
- 5. Add chisope to the boiling water
- 6. Stir occasionally until cooked
- 7. Serve as relish

### **Nutrition information**

Rich in vitamins and minerals.

## 3.19 DRIED RAPE



#### **INGREDIENTS**

3 handfuls dried rape 1 cup pounded groundnuts\* 1 cup water 1 tomato Salt to taste

#### **METHOD**

- 1. Remove undesirable bits and wash the rape
- 2. Put the washed rape in a pot, add water and boil for 5 minutes
- 3. Chop tomato
- 4. Add groundnuts, salt and chopped tomato
- 5. Cook for 10-15 minutes
- 6. Serve as relish



#### **NOTE:**

\*Cooking oil can be used in the place of groundnuts; in which case the cooking time is reduced.



#### **Nutrition information**

Rich in proteins, energy, vitamins and minerals.

## 3.20 BUNKULUNKULU RELISH

#### **INGREDIENTS**

2 cups bunkulunkulu flowers 1 cup pounded groundnuts ½ cup water Salt to taste

#### **METHOD**

- 1. Put water and salt in a pot and boil
- 2. Add *bunkulukulu* flowers and cook for 2 minutes
- 3. Add pounded groundnuts
- 4. Cook for 10-15 minutes stirring occasionally
- 5. Serve with Nshima



### **Nutrition information**

Rich in energy, proteins and vitamins.



#### **INGREDIENTS**

2 handfuls pondesha leaves 2 tablespoons pounded groundnuts 2 tomatoes 1 cup water ½ teaspoon cooking soda Salt to taste

#### **METHOD**

- 1. Remove undesirable bits and wash the pondesha leaves
- 2. Pound pondesha leaves
- 3. Chop tomatoes
- Add chopped tomatoes to pondesha leaves and continue pounding
- 5. Put the mixture in a pot
- 6. Add water and mix well
- 7. Add soda and cook for 5 minutes.
- Add groundnuts and cook for 10-15 minutes.
- 9. Serve as relish

#### **Nutrition information**

Rich in energy, vitamins and minerals.



## 3.22 KACESHA RELISH

(Dried cowpea leaves in cowpea sauce)

#### **INGREDIENTS**

1 cup dried cowpea leaves
2 tablespoons cooking oil
1 cup cowpea flour
1 tomato
1 onion
½ teaspoon soda (optional)
3 cups water
Salt to taste



#### **METHOD**

- 1. Soak cowpea leaves in 2 cups water for 1 hour
- 2. Pour the water into a pot and put aside
- 3. Wash the leaves in fresh water to remove the sand, if any
- 4. Put the washed cowpea leaves in the water previously kept aside
- 5. Put the pot on the fire and add soda
- 6. Add 2 tablespoons cooking oil and stir
- 7. Chop tomato and onion
- 8. Add chopped tomato and onion, cowpea flour and salt.
- 9. Cook on low heat for 10 minutes stirring occasionally to avoid sticking
- 10. Serve as relish

### **Nutrition information**

Rich in proteins, vitamins and minerals.



## 3.23 PUMPKIN FRITTERS



#### INGREDIENTS

1 cup mashed cooked pumpkin

1 cup wheat flour

2 eggs

1 teaspoon baking powder

1 small pepper

1 small onion

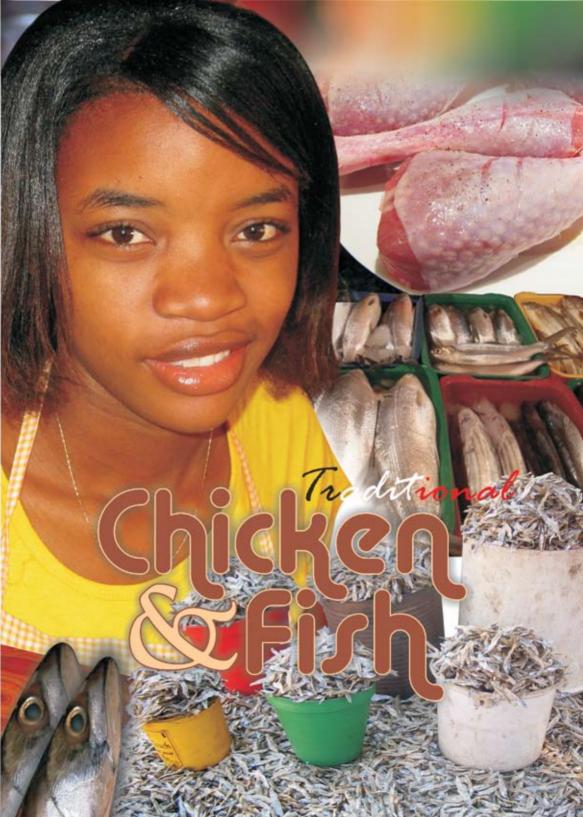
Salt to taste

#### **METHOD**

- 1. Chop pepper and onion
- 2. Mix mashed cooked pumpkins, chopped pepper and onion in a bowl
- 3. Break eggs in a cup and beat well
- Add beaten eggs, flour and baking powder to the mixture
- 5. Mix well to a thick consistency dough
- Scoop dough using a spoon and fry in hot oil until golden brown
- 7. Serve as a snack

#### Nutrition information

Rich in energy, vitamins and minerals.



## 4.1 CHICKEN MUSHROOM SOUP



#### **INGREDIENTS**

2½ cups sliced fresh mushrooms

2 medium sized chicken pieces

6 slices ginger

2 onions

2 tablespoons lemon juice or 1 tablespoon vinegar

3 cloves garlic

2 tablespoons cooking oil

10 cups water

Salt to taste

#### **METHOD**

- 1. Remove bones from the chicken and cut it into small pieces
- 2. Put cooking in a big pot and heat
- 3. Fry ginger and garlic in the oil
- 4. Remove the fried ginger and garlic mixture and set aside on a plate
- 5. Fry the chicken pieces in the same pot
- 6. Put the ginger and garlic mixture, mushroom to the fried chicken. Mix well
- 7. Add 10 cups of water and boil slowly on low heat for 1 hour
- 8. Chop onions
- 9. Add chopped onions and lemon juice or vinegar to the boiling pot.
- 10. Stir occasionally until a thin layer or skin appears on top
- 11. Serve hot





### **NOTE:**

- a) Any type of mushroom can be used such as button, oyster and tente
- b) Beans, meat and vegetables can replace chicken

### **Nutrition information**

Rich in energy, proteins, vitamins and minerals.

## 4.2 CHICKEN IN GROUNDNUT SAUCE

#### **INGREDIENTS**

1 whole chicken

3 tablespoons groundnut paste

6 fingers fresh okra

3 tomatoes

1 onion

2 cups water

Salt to taste



#### **METHOD**

- 1. Wash the chicken and cut into standard pieces
- 2. Put chicken pieces in a medium sized pot
- 3. Chop onion, tomatoes and okra
- 4. Add chopped onion, tomatoes and okra
- 5. Add water and salt
- 6. Cook until chicken is tender
- 7. Put groundnut paste in a cup and add a little water, stir to a smooth paste
- Pour the groundnut paste into the pot and mix well
- 9. Cook for 15 minutes
- 10. Serve as relish

Rich in energy proteins, vitamins and minerals.



#### **INGREDIENTS**

2 cups of fresh mushrooms

1 medium sized fish

1 onion

3 cloves garlic

2 medium tomatoes

2 teaspoon cooking oil

1 green pepper

2 cups water

Salt to taste



#### **METHOD**

- Soak the fish in cold water for 45 minutes
- 2. Remove bones from the fish. Break the fish into sizable pieces
- Put the fish in a pot, add water boil slowly for 1 hour
- Wash the mushroom and chop
- Add chopped mushroom to the boiling fish and cook for 10 minutes.
- Chop green pepper, garlic, tomatoes and onion separately
- 7. Add cooking oil, salt, chopped green pepper, garlic, tomato and onion to the pot
- 8. Cook for 30 minutes
- 9. Serve as relish

NOTE: Meat can be used in place of fish.

#### **Nutrition information**

Rich in energy, proteins, vitamins and minerals. Recommended for children above 12 months



## 4.4 DRIED FISH IN CASSAVA LEAVES



#### **INGREDIENTS**

1 medium dried fish
1 handful fresh cassava leaves
1 tomato
1 onion
2 tablespoons cooking oil
2 cups water
Salt to taste



#### **METHOD**

- 1. Soak the fish in cold water for 45 minutes
- 2. Lightly wash the fish in the same soaking water
- 3. Remove bones from the fish. Break the fish into sizable pieces
- 4. Wash the cassava leaves and shake off excess water
- 5. Pound the cassava leaves in a mortar to obtain small pieces (but not mashed consistency)
- 5. Put pounded cassava leaves in a pot, add water and cook for 30 minutes without covering the pot
- 7. Cover the pot and cook for another 30 minutes
- 8. Chop onion and tomato
- 9. Add fish, chopped <mark>onion,</mark> tomato, cooking oil an<mark>d salt</mark>
- 10. Continue cooking and stir the mixture occasionally
- 11. Cook for 45 minutes to one hour
- 12. Serve as relish



Rich in energy proteins, vitamins and minerals.

## 4.5 CINTELE CANSWI (Fish sauce)

#### **INGREDIENTS**

1 medium size dried fish 1 cup roasted groundnuts 3 cups water 1 tomato 1 onion Salt to taste



#### **METHOD**

- 1. Roast the dried fish until brown
- 2. Pound the fish and sieve to obtain a flour
- 3. Lightly pound the groundnuts and winnow to remove the skin

Note—Recipe 4.4

<u>DRIED FISH IN</u>

<u>CASSAVA LEAVES</u>

Cooking the cassava leaves without covering the pot for the first 30 minutes is important to allow evaporation of hydrogen cyanide.

- 4. Pound the winnowed groundnuts and sieve to obtain flour
- Mix the fish and groundnut flour in a bowl
- 6. Add 1 cup of water to make a paste
- 7. Boil 2 cups of water in a medium pot
- 8. Pour the paste to the boiling water
- 9. Chop tomato and onion
- 10. Add chopped tomato and onions to the mixture
- 11. Add salt and cook for 10 to 15 minutes
- 12. Serve as relish

#### **Nutrition information**

Rich in proteins, vitamins and minerals



## 4.6 FISH IN DRIED CUCUMBER



#### **INGREDIENTS**

1 medium size dried fish
2 cups dried cucumber pieces
2 cups water
1 tomato
1 onion
2 tablespoons cooking oil
Salt to taste

#### **METHOD**

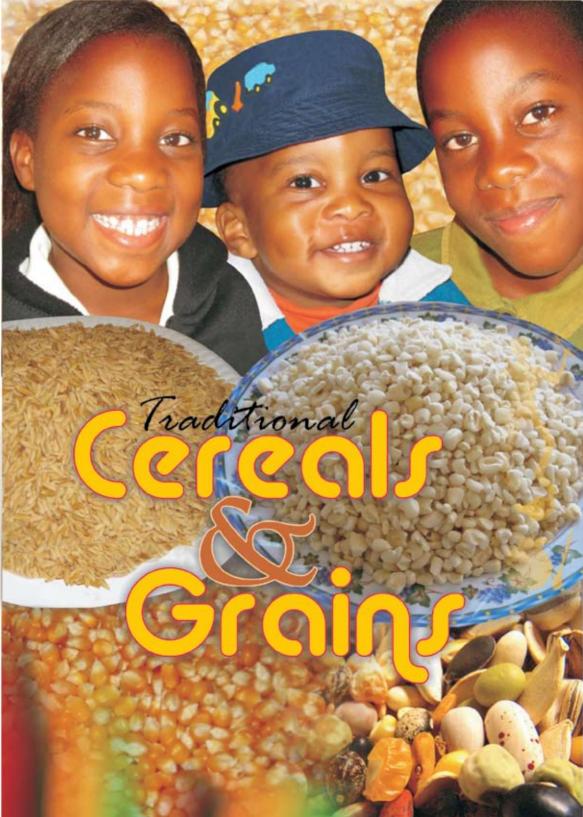
- 1. Wash the dried fish and put in a big pot,
- 2. Add water and boil the fish for 2 hours
- 3. Wash the cucumbers and add to the boiling fish
- 4. Chop tomato and onion
- 5. Add salt, cooking oil chopped tomato and onion

Cook for 45 minutes To 1 hour

7. Serve as a relish



Rich in energy, proteins and minerals.



## **5.1 MASAU PORRIDGE**



#### **INGREDIENTS**

2 cups masau fruit

2 cups mealie meal

2 cups water

1 tablespoon sugar

#### **METHOD**

- 1. Select good and whole masau fruits
- 2. Wash the masau fruits
- 3. Boil the *masau* fruit in a pot until soft. Cool the cooked *masau* fruit
- Mash the cooked masau fruit with a cooking stick
- 5. Sieve the mash to obtain a puree
- 6. Put the puree in a pot and place on heat
- Add mealie meal to the puree bit by bit while stirring.
- 8. Cook for 15 minutes
- 9. Add sugar if desired
- 10. Serve as a meal

### **Nutrition information**

Rich in energy, proteins and minerals. Suitable for children

## 5.2 FRESH MAIZE PORRIDGE

#### **INGREDIENTS**

1 cup pounded fresh maize 2 cups liquid milk Salt and sugar to taste

#### **METHOD**

- 1. Mix pounded fresh maize with milk in a pot.
- 2. Add salt and sugar
- 3. Stir continuously until the porridge starts boiling
- 4. Cook for 15-20 minutes
- 5. Serve warm



Rich in proteins, energy and minerals. Suitable for children





#### **INGREDIENTS**

1 medium fresh pumpkin 2 cups maize samp 2 cups legume flour Enough water Salt and sugar to taste

#### **METHOD**

1. Wash samp and boil in water until soft

2. Wash, peel and chop the fresh pumpkin into small pieces

3. Add the chopped pumpkin to the samp and boil until the pumpkin is cooked

4. Add legume flour, salt, sugar and mix well

5. Cook for 10-15 minutes

6. Serve for breakfast or as a snack

#### **NOTE:**

Legume flour can be made from groundnuts, cowpeas or bambara nuts.

Provides energy, protein, vitamins and minerals

## 5.4 THOBWA

#### **INGREDIENTS**

5 cups maize meal 5 litres water 1½ cups sprouted millet flour Sugar (optional)



- 1. Put water in a big pot and boil
- 2. Put mealie meal in a bowl and add water to make a paste.
- Pour the paste while stirring into the boiling water
- 4. Leave to cook for 10-20 minutes
- 5. Cool the porridge to room temperature
- 6. Add millet flour bit by bit while stirring until all the millet flour is used
- 7. Cover the mixture and keep aside until the next day.
- 8. Check bubbles to make sure that the porridge has fermented
- 9. Boil the fermented porridge for 30 minutes while stirring continuously
- 10. Serve as a hot or cold drink

#### **Nutrition information**

Provides energy, protein, vitamins and minerals





#### **INGREDIENTS**

Sour milk Nshima Sugar (Optional)

#### **METHOD**

- 1. Divide the nshima\* into small pieces in a bowl using a spoon
- 2. Add sour milk and mix well
- 3. Add sugar
- 4. Serve as a meal



#### **NOTE:**

The nshima must be cold before adding sour milk

Rich in proteins and energy

## 5.6 CHIBBUBBU SNACK

#### **INGREDIENTS**

2 cobs fresh maize 3 cups water Salt to taste



#### **METHOD**

- 1. Remove maize grains from the cob
- 2. Put the maize grains into a clean mortar and pound into a paste
- 3. Add salt to the pounded maize and mix well
- 4. Wrap the mixture in green maize husk and tie the ends tightly with strips of husks
- 5. Put enough water in a pot and boil
- 6. Place the chibbubbu in boiling water and cook for 20 to 30 minutes
- 7. Serve as a snack

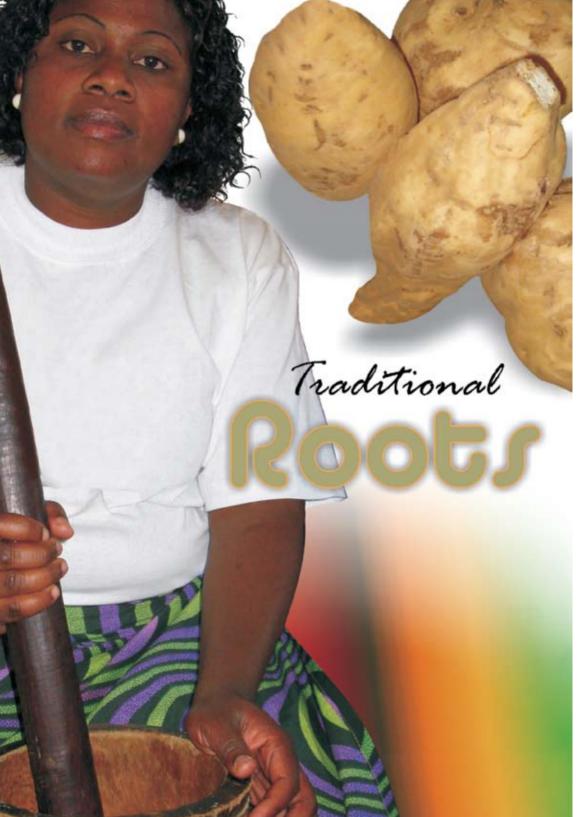




### **Nutrition information**

Rich in energy and vitamins







## **6.1 CASSAVA CHIPS**



#### **INGREDIENTS**

1 small fresh sweet cassava root 1 cup cooking oil Salt to taste

Cassava chips can be prepared using either of the two methods

#### METHOD 1

- 1. Wash and peel the cassava root
- 2. Cut the cassava into thin strips
- 3. Put the cassava stripes in a small pot
- 4. Boil cassava stripes in 2 cups of water for 5-10 minutes
- 5. Heat oil in a frying pan on low heat.
- 6. Fry until slightly brown
- 7. Remove from the frying pan and sprinkle with salt
- 8. Serve warm as a snack



#### **METHOD 2**

- Wash and peel cassava root
- 2. Chip the cassava using a mechanical chipper
- 3. Heat oil in a frying pan
- 4. Fry the chipped cassava until slightly brown.5. Remove from the frying pan and sprinkle with salt
- Serve warm as snack



### **Nutrition information**

Provides energy

## **6.2 BUSALA WITH DRIED KAPENTA**

### **INGREDIENTS**

Salt to taste

2 cups chopped fresh busala 2 cups water ½ cup dried kapenta 1 cup pounded groundnuts 3 tomatoes 1 onion







#### **METHOD**

- 1. Wash, peel and cut busala roots
- 2. Boil the cut busala roots for 10 minutes
- 3. Wash kapenta and add to the boiling busala
- 4. Chop tomatoes and onion
- 5. Add chopped tomatoes and onion to the boiling *busala*
- 6. Add salt and groundnuts. Mix well
- 7. Cook for 10–15 minutes
- 8. Serve as relish



**Nutrition information** 

Rich in proteins, energy and minerals.

## 6.3 SWEET POTATO CRISPS



#### **INGREDIENTS**

4 medium sized sweet potatoes 1 cup cooking oil Salt to Taste

#### **METHOD**

- 1. Wash, peel and slice the sweet potatoes
- 2. Soak in cold water overnight
- 3. Remove from the water and drain the sweet potatoes
- 4. Put cooking oil on a pan and place on heat
- 5. Fry the sweet potatoes to a light crisp brown
- 6. Serve as a snack

Rich in energy. Suitable for children

## **6.4 CARROT CAKE**

#### **INGREDIENTS**

2 cups grated carrots

2 cups flour

4 eggs

2 cups sugar

1½ cups cooking oil

2 teaspoons baking soda

2 teaspoons salt

#### **METHOD**

- 1. Place carrots and sugar in a bowl
- 2. Mix carrots and sugar together well
- 3. Break eggs in a cup to make sure that they are fresh, beat
- 4. Add cooking oil and eggs to the mixture
- 5. Add baking soda and salt
- 6. Add flour and mix the ingredients well
- 7. Place in a baking tin
- 8. Bake in hot oven for 20-30 minutes
- 9. Serve as a snack

### **Nutrition information**

Rich in energy, protein, minerals and vitamins







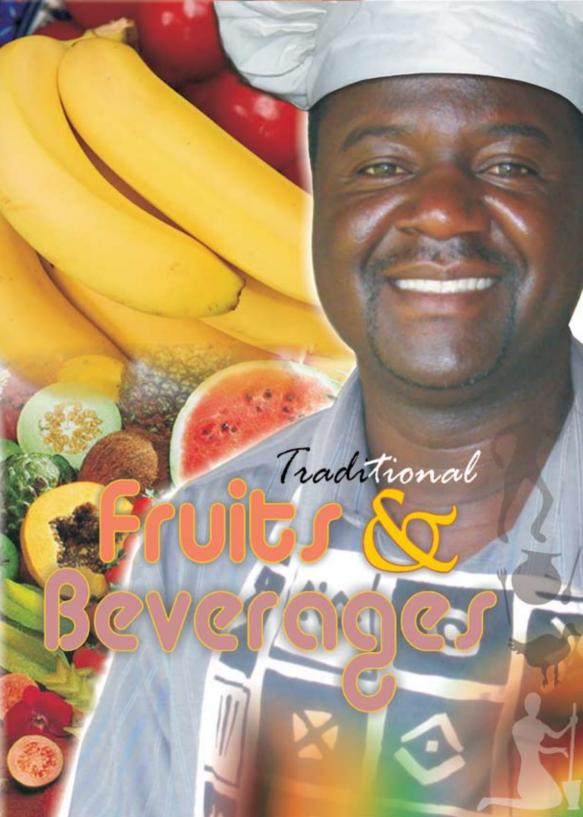
3 medium size sweet potatoes 3 unripe bananas 1 cup groundnut paste 1 tablespoon sugar 2 cups water Salt to taste

## **METHOD**

- 1. Wash and peel sweet potatoes
- 2. Cut peeled sweet potatoes into small pieces and put in a pot
- 3. Add water to cover the sweet potatoes and boil
- 4. Peel and slice the bananas and add to the boiling sweet potatoes
- 5. Cook for 20–30 minutes
- 6. Put groundnut paste in a cup, add a little water and stir to a smooth paste
- 7. Add the groundnut paste to the mixture in the pot and cook for another 10-15 minutes
- 8. Add salt and sugar. Mix well
- 9. Serve as a meal

Rich in proteins, carbohydrates and vitamins. Good for children





# 7.1 BANANA CRISPS



## **INGREDIENTS**

4 unripe bananas ½ cup cooking oil Salt to taste

## **METHOD**

- 1. Wash the bananas and peel
- 2. Cut peeled bananas into thin rings
- 3. Heat cooking oil in a frying pan
- 4. Fry the banana pieces until crispy
- 5. Remove from the pan
- 6. Sprinkle with salt
- 7. Serve as snack

Rich in energy

# 7.2 MUBULA (Dried Mpundu)

#### **INGREDIENTS**

2 cups ripe mubula fruits

#### **METHOD**

- 1. Wash the mubula fruits
- 2. Pound the *mubula* fruits gently in a mortar taking care not to break the seeds.
- 3. Remove the hard seeds from the mash.
- 4. Make a flat cake and dry in the shade for two to three days
- 5. Serve as a snack

## Note:

Dried mubula can also be stored for the whole year in an air tight container.

# **Nutrition information**

Rich in energy, vitamins and minerals





## **MASUKU PUREE** 7.3. (Wild loquat)

#### **INGREDIENTS**

4 cups ripe whole masuku fruits

#### **METHOD**

- 1. Wash masuku fruits
- 2. Squeeze the *masuku* fruit into a clean bowl with hands to remove thick liquid
- Pass the squeezed liquid through a sieve to remove the seeds
- 4. Serve the masuku liquid as a beverage

# 7.4 MPONDO SNACK

(Monkey bread)

#### INGREDIENTS

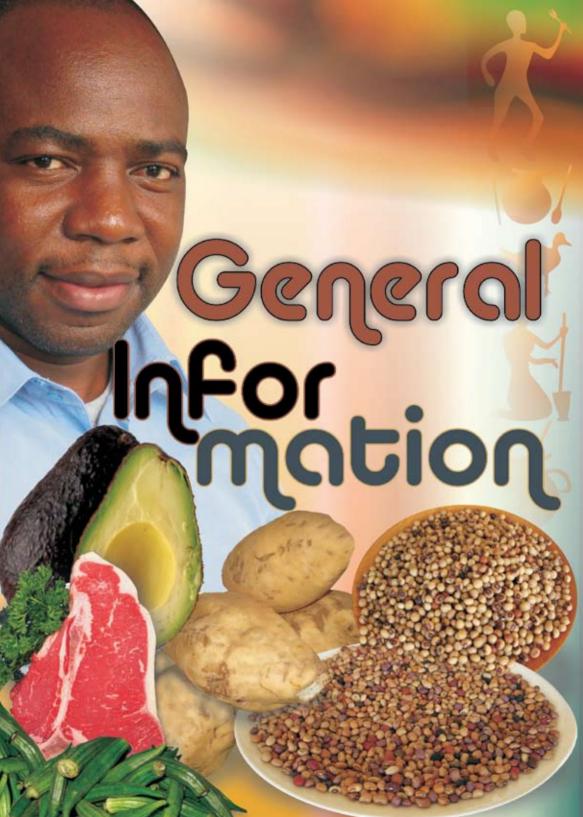
2 cups mpondo seeds **Enough water** 

#### **METHOD**

- 1. Wash the mpondo seeds
- Put the *mpondo* seeds in a pot and add water
- Boil for 10 to 15 minutes or until soft
- Serve hot as a snack

# **Nutrition information**

- **7.3** -Rich in energy, vitamins and minerals
- 7.4 -Rich in minerals and energy



## 8.1 BASIC NUTRITION

Nutrition is the understanding of food and how the body uses it. The human body needs nutrients in form of carbohydrates, proteins, minerals and vitamins in different amounts. The nutrients are needed for production of energy, growth and maintenance including fighting infections and diseases.

Good nutrition constitutes consumption of a variety of safe and right foods in the right quantities to meet the body's nutrient needs. No single food contains all the nutrients apart from breast milk for babies up to the age of 6 months. Planning a balanced diet requires knowledge about the sources of nutrients, requirements for various occupational and age groups, seasonal availability of various food stuffs and dietary habits of people. This is especially critical for the low income population groups; requiring careful selection and preparation of available local and traditional foods.

Carbohydrates provide energy that enables the body to do work, play, move, think and keep warm. Some foods used in this book that provide energy are cassava, maize and sweet potatoes. Oils and fats are concentrated sources of energy. Examples of foods rich in fats and oils used in this book include groundnuts, pumpkin seeds, mungongo nut, cowpeas and bambara nuts. Proteins promote growth and maintain body cells. Some foods that are rich in protein are meat, fish, bambara nuts, cowpea and groundnuts. Minerals and vitamins are important for the normal

# 8.2 NUTRITION AND HIV/AIDS

Nutrition and HIV/AIDS are related in many ways. HIV/AIDS reduces the body's capacity to fight infections and diseases making the body sick and weak. These diseases modify the body's mode of operation such as temperature fluctuations: making HIV/AIDS infected person's nutritional needs to increase. HIV causes or aggravates malnutrition by reducing appetite and intake, increasing energy needs compromising nutrient absorption due to poor digestion and difficulties in eating. HIV infected individuals lose weight and lack important nutrients such as Vitamin A and minerals such as zinc. Malnutrition can hasten the progression of HIV and worsen its impact by weakening the immune system, increasing susceptibility to opportunistic infections and reducing the effectiveness of treatment.

Note that good nutrition is not a cure to HIV/AIDS but can help in reducing the many negative effects of the disease. Eating well has various advantages to the person with HIV/AIDS. Good nutrition helps to decrease the rate of developing into full blown AIDS. In fully blown AIDS, good nutrition helps the patient to recover faster and therefore prevent malnutrition. It is therefore advisable that a person with HIV/AIDS

This recipe book demonstrates preparation of recipes using ingredients from various food groups such as legumes, pulses, cereals and grains roots and tubers as well as vegetables and fruits. Some recipes help increase appetite while others provide easily digestible soft foods and of high nutrient content, making them suitable for HIV/AIDS patients.

# 8.3 INFANT AND YOUNG CHILD FEEDING (IYCF)

Feeding infants and young children requires that mothers and care givers understand each child's likes and requirements. Complementary feeding is the art of giving additional foods to infants and young children after the age of 6 months in addition to breast milk.

Infant and young child meals should provide sufficient nutrients in terms of proteins, carbohydrates, vitamins and minerals. This requires that the diets include foods from various groups such as legumes, cereals and grains, roots and tubers and as well vegetables and fruits. Legumes, meat, fish, *kapenta*, and eggs can be pounded or mashed to make them soft and easy to eat and digest. Some of these can also be added to

porridge. It is good practice to include mashed fruits and vegetables as well as fruit juices in children's diets.

The foods given should be safe, nutritious, locally available, digestible and affordable. This means that the food should be stored safely, prepared in a clean place using clean utensils and served immediately after preparation. The foods should be given in sufficient amounts and must be of the right consistency. Thick consistency porridge is preferred as it gives more energy than a light one. The feeding frequency and amounts should be increased as the child grows.

The World Health Organisation (WHO) recommends an initial 2-3 times feeding frequency a day for children between 6-8 months, increasing to 3-4 times daily between 9-11 months and 12-24 months with additional nutritious snacks offered 1-2 times per day. This entails that mothers and care givers should be patient and creative while responding to the individual needs of infants and young children.

# 8.4 TIPS ON HYGIENE AND FOOD SAFFTY

If hygiene and food safety are not observed, food can be a source of disease. Worse still food could even lead to cases of food poisoning which may sometimes prove fatal especially in the case of infants and young children as well as for immune compromised individuals as is the case in HIV/AIDS patients.

Basic principles of food hygiene need to be followed at all stages of the food chain in handling and preparation right through to consumption. These include the fact that:

- a) All cooking utensils should be washed and kept clean at all times;
- All the ingredients and water to be used in the preparation of meals should be clean and fresh;
- c) Food labels should be read; especially to check the expiry date;
- foods like fruits and vegetables should be washed before use. Special care should be taken for foods and vegetables used in salads;
- e) Hands should be washed with soap before preparing any food;
- f) Left over food that has been exposed to dirty and germs should not be used;
- g) Food should be covered at all times;
- h) Finger nails should be kept short and clean to avoid harbouring dirt and therefore contaminating food;
- i) Food should be stored in a clean and safe place:
- j) Vegetables and fruits should not be stored together;
- k) Wash hands before eating and after visiting the toilet.

# 9. PREPARATION OF PRE-PROCESSED INGREDIENTS

## 9.1 PUMPKIN PRESERVATION

- a) Wash and peel the pumpkin;
- b) Cut into slices and remove the seeds;
- c) Put on a tray or flat basket and cover with a net;
- d) Dry in sun for three to four days.

#### 9.2 VEGETABLE PRESERVATION

- a) Wash and cut the vegetables;
- b) Place the vegetables in a basket;
- c) Boil water and place the basket above the boiling water;
- d) Steam the vegetables for 10 to 15 minutes turning them continuously
- e) Put on a flat basket or tray;
- f) Dry in shade for three to four days.

## 9.3 PREPARATION OF GROUNDNUT PASTE

- a) Select good groundnuts;
- b) Roast on a pan until slightly brown;
- Pound in a mortar and sieve several times before it becomes sticky. Place the groundnut flour into the mortar and pound to a paste;
- d) Use the paste as desired.

# 9.4 PREPARATION OF LOCAL SODA (FISHIKISA)

- a) Collect clean ash and put in a pot;
- b) Add water and mix;
- c) Allow to settle;

- d) Drain out the liquid (soda);
- e) The liquid is ready for use as desired.

#### 9.5 PRE-TREATMENT OF SOYA BEANS

- Select good whole soya beans. Make sure that all the broken soya beans are removed to prevent development of off flavours;
- b) Boil 2 litres of water in a medium pot;
- c) Drop soya beans bit by bit into the boiling water. It is important to drop the soya beans bit by bit so that the water continues boiling all the time;
- d) Cook for 45 minutes:
- e) Remove from heat and add cold water. Leave to cool:
- f) Remove the skins from the boiled soya beans:
- g) The soya beans can now be used for different recipes;
- H) The soya beans can also be dried. The dried beans can be made into flour or pounded to make milk.

# Pre-treatment time for legumes

Legume	Boiling time (minutes)	
	wet	Dry
Soya beans	40 - 45	15
Bambara	35 - 45	15
Pigeon peas	25 - 30	15
Cowpeas	15 - 20	10

# 10. APPENDICES

# 10.1 LIST OF MACO STAFF WHO PARTICIPATED IN DEVELOPING THE BOOK

1.	Nixon Miyoba	Luapula Province
2.	Monica Mulenga	Lusaka Province
3.	Priscilla Nyeleti	Lusaka Province
4.	Gloria Siwale	Lusaka Province
5.	Nyati Murambiwa	Western Province
6.	Katumwa Mutandi	Central Province
7.	Alice Moono	Central Province
8.	Hope Mufiti	Lusaka Headquarters
9.	Annie Mutale	Lusaka Province
10.	Mary Simukali	Lusaka Province
11.	Ngosa Manda	Lusaka Province

# 10.2 BOTANICAL/ENGLISH/COMMON NAMES FOR SOME FOODS

LOCAL NAME	ENGLISH NAME	BOTANICAL NAME
Chinshungwa	Cats Whiskers	Cleome Gynandra
Kanuka	Blackjack	Bidenis Pilosa (SP)
Impwa	Egg Plant	Solanum Aethiopicum
Sololo		
Mungongo	Featherweight Tree	Schinziophy to n Ratanenii
Pondesha (Pupwe)		
Busala	Smallflower Moringglory	Jac quem on tia Fam nifo lia
Mundambi	Rosella	Hibiscus Mechowii
Masuku	Wild Loquat	Uapaca Kirkiana
M p o n d o	Monkey Bread	Bauhinia Petersiana
Chamuddonga	Washerwoman	Alternathera Caracasana
Kayuniyuni	Wild Cat Whiskers	Cleome Hirta
Makondole	Cucurbits	
Mpundu	Mobola Plum	Parinari Curallifolia
Chigologodo	Wild Raisin Fruit	Grewia Decemovulata Merxm
Bondwe	Wild Spinach	Amaranthus Hibrindus
Bunkulunkulu	Wild Lablab	Lablab Purpurea

# 11. ACRONYMS

ISTT - In-Service Training Trust
IYCN - Infant and Young Child
Feeding Nutrition Project
MACO - Ministry of Agriculture and
Cooperatives

NAIS - National Agricultural Information Services

NFNC - National Food and Nutrition Commission

PAM - Programme Against Malnutrition

**USAID** - United States Agency for International Development

WHO - World Health Organisation

**ZARI** - Zambia Agricultural Research Institute

# 12. **REFERENCES**

- Food Legume Crops, Fighting Malnutrition in Zambia, ICM/FL project
- 2. **Food Utilisation Training Manuals,**Programme Against Malnutrition (PAM)
- 3. Healthy Family Cook Book Guide, JICA.
- 4. Guide to Selected Edible Plants and Mushrooms of Zambia and their Uses, PAM 2006
- 5. Ministry of Agriculture and Cooperatives Collection of Recipes, Food and Nutrition Section 2006-2009
- 6. Nutritional Guidelines for Care and Support of People Living with HIV/AIDS
- 7. Recipe Book On Zambian Traditional Foods, MAFF 2000
- 8. **Soya Bean Cooking in Zambia,** Dave Wynne.

