





## **NUTRITIONAL SIGNIFICANCE OF SMALL MILLETS (100g)**

Small Millets	Protein (g)	Carbohydrate (g)	Fat (g)	Crude fibre (g)	Calcium (mg)	Phosphorus (mg)	iron (mg)	Energy (K.cal)	Thiamine (mg)	Niacin(mg)
Finger millet	7.30	72.00	1.30	3.60	344.00	283.00	3.90	336.00	0.42	1.10
Foxtail millet	12.30	60.20	4.30	6.70	31.00	290.00	2.80	351.00	0.59	3.20
Little millet	7.70	67.00	4.70	7.60	17.00	220.00	9.30	329.00	0.30	3.20
Kodo millet	8.30	65.90	1.40	5.20	35.00	188.00	0.50	353.00	0.15	2.00
Proso millet	12.50	70.40	1.10	5.20	8.00	206.00	2.90	354.00	0.41	4.50
Barnyard millet	6.20	65.50	4.80	13.60	22.00	280.00	5.00	300.00	0.33	4.20







### THERAPEUTIC VALUE OF MILLETS AND MANAGEMENT OF DISEASES

#### **Diseases**

# Causes of diseases

# Role of small millets

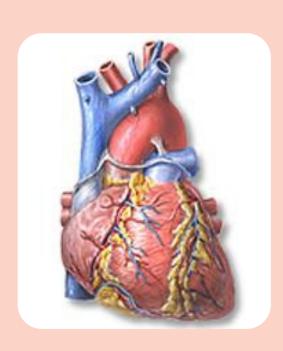
#### **Obesity**



- High food intake beyond the recommended allowance of the food
- \* Stress
- Hormonal imbalance
- Heredity
- Less physical activity

- Small millets are rich in protein, fibre and minerals like calcium, phosphorus and iron.
- The high fibre content helps to reduce the fat deposited in the body.

#### **Heart diseases**



- Intake of high fat foods
- Heredity
- Less physical activity
- Diabetes mellitus
- Smoking

- Small millets are rich in phytonutrients, it helps to reduce the fat in the blood.
- Increased High Density Lipoprotein (HDL)

## **Diabetes Mellitus**



- Hypoglycemic and hyperglycemic condition
- Less physical activity
- Heredity

- Millets contain high fibre which increases intestine transit time.
- Millets are low glycemic foods.







#### IMPORTANCE OF BREAKFAST AND USES OF SMALL MILLETS



- Breakfast is the most important meal of the day.
- Breakfast must provide 25 % of our daily calorie intake.
- A good breakfast provides the nutrients that people need to start their day.
- Children who eat a good breakfast perform better in school.
- Breakfast increases the concentration, memory power and prevents headache, lethargy among school going children.
- Small millets being nutritionally superior to rice and wheat, provide good source of proteins, minerals and vitamins.
- Small millets are highly suitable for the development of traditional breakfast recipes.
- Recipes like Idli, Dosai, Pongal Paniyaram, Adai, Idiyappam, Kali, Porriadge, Pittu and Appam were developed using small millets.

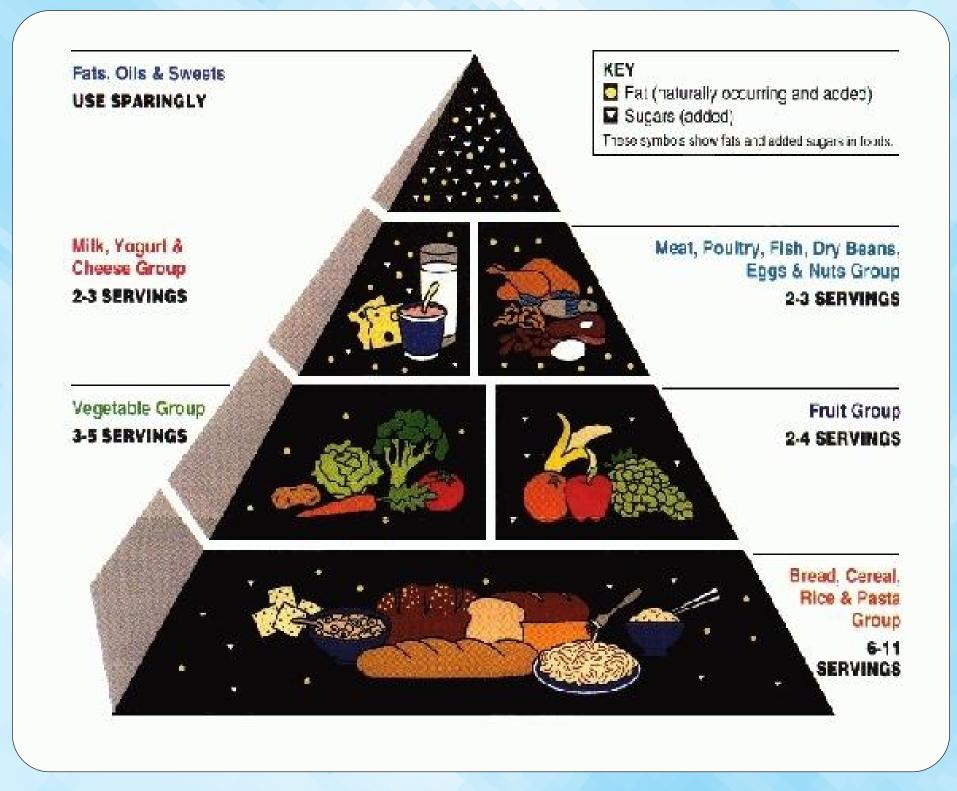






### **Balanced diet**

A good or adequate diet is known as balanced diet. A balanced diet yields daily nutrients in the proper amounts and proportion required by the body. Nutritional requirements vary according to age, sex, physical activities and other physiological conditions.



#### Indian Council of Medical Research - Classification of food groups

- Cereals and cereal products
- Pulses and legumes
- Milk and milk products
- Fruits and vegetables
- Fats and oils







#### **USES OF SMALL MILLETS IN PREPARATION OF INFANT FOODS**



- Germinated ragi is extensively used in the preparation of weaning foods.
- Germinated cereals and millets are easily digested.
- Soaking and germination destroy anti nutrients presents inn the millets and other cereals.
- Germination is a store house of nutrients to facilitate easy absorption of iron in the body.
- Germination improves the ratio of soluble to insoluble fibre.

#### Nutrient content of malted millet flour (100g)

Protein - 13.25 g
Carbohydrate - 30.31 g
Fat - 3.87 g
Crude fibre - 3.75 g
Calcium - 298 mg
Phosphorus - 335 mg
Iron - 3.69 mg









### TRADITIONAL PRODUCTS FROM MILLETS



**Kodo Millet Murukku** 



Little Millet Kolukkattai



LITTLE MILLET PAYASAM



**FINGER MILLET IDIAPPAM** 



LITTLE MILLET PAKODA



**BARNYARD MILLET PITTU** 

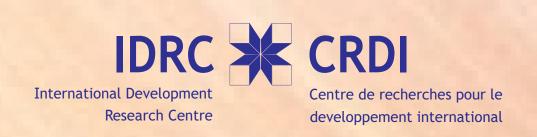


**FOXTAIL MILLET KESARI** 



**KODO MILLET HALWA** 







### PROCESSING OF SMALL MILLETS









Revalorizing small millets: "Enhancing the food and nutritional security of women and children in rain fed regions of South Asia using underutilized species".



Post Harvest Technology Centre
Agricultural Engineering College & Research Institute
Tamil Nadu Agricultural University
Coimbatore - 641 003