

TECHNICAL BULLETIN ON SM FOOD PRODUCTS

Tamil Nadu Agricultural University;

;

© 2018, TAMIL NADU AGRICULTURAL UNIVERSITY AND DHAN
FOUNDATION



This work is licensed under the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/legalcode>), which permits unrestricted use, distribution, and reproduction, provided the original work is properly credited.

Cette œuvre est mise à disposition selon les termes de la licence Creative Commons Attribution (<https://creativecommons.org/licenses/by/4.0/legalcode>), qui permet l'utilisation, la distribution et la reproduction sans restriction, pourvu que le mérite de la création originale soit adéquatement reconnu.

*IDRC Grant/ Subvention du CRDI: 108128-002-Scaling Up Small Millet Post-Harvest and
Nutritious Food Products (CIFSRF Phase 2)*

Technical Bulletin on Value Added Products from Small Millets

Research Institution
TNAU
DHAN Foundation

Report Type
Technical bulletin

Location of Study
India

Prepared by
TNAU



Date
October 2016

**Scaling up Small Millet Post-harvest and Nutritious Food
Products Project**

Contents

I. BREAKFAST RECIPES FROM SMALL MILLETS

| | | |
|-----|------------------------------|----|
| 1. | IDLI..... | 2 |
| 2. | DOSA..... | 3 |
| 3. | PANIYARAM..... | 4 |
| 4. | IDIAPPAM..... | 5 |
| 5. | ROTTI..... | 6 |
| 6. | PUTTU..... | 7 |
| 7. | UPPMA..... | 8 |
| 8. | ADAI..... | 9 |
| 9. | KITCHADI..... | 10 |
| 10. | CHAPPATHI..... | 11 |
| 11. | KHAKRA..... | 12 |
| 12. | SMALL MILLET METHI RICE..... | 13 |

II. SWEET RECIPIES

| | | |
|----|-----------------------|----|
| 1. | SWEET PONGAL..... | 14 |
| 2. | HALWA..... | 15 |
| 3. | SWEET KOLUKATTAI..... | 16 |
| 4. | PAYASAM..... | 17 |
| 5. | ADHIRASAM..... | 18 |
| 6. | KESARI..... | 19 |
| 7. | SWEET ADAI..... | 20 |
| 8. | MILLET BOLI..... | 21 |

| | | |
|-------------|---|----|
| III. | SNACKS | |
| 1. | VADA..... | 22 |
| 2. | PAKODA..... | 23 |
| 3. | RIBBON PAKODA..... | 24 |
| 4. | HOT KOLUKATTAL..... | 25 |
| 5. | MURUKKU..... | 26 |
| 6. | OMAPODI..... | 27 |
| 7. | THATTU VADAI..... | 28 |
| 8. | SEEDAI..... | 29 |
| 9. | SMALL MILLET VEGETABLE PAKODA..... | 30 |
| IV. | PUFFED PRODUCTS | |
| 1. | SMALL MILLET POPCORN..... | 31 |
| V. | PASTA PRODUCTS FROM SMALL MILLETS | |
| 1. | VERMICELLI..... | 32 |
| 2. | MACARONI..... | 33 |
| VI. | BAKERY PRODUCTS FROM SMALL MILLETS | |
| 1. | SMALL MILLET BREAD..... | 34 |
| 2. | SMALL MILLET BUN..... | 35 |
| 3. | SMALL MILLET BISCUIT..... | 36 |
| 4. | SMALL MILLET CAKE..... | 37 |
| 5. | SMALL MILLET DOUGH NUT..... | 38 |
| 6. | SMALL MILLET BREAD ROLL..... | 39 |
| VII. | INSTANT SMALL MILLET MIXES | |
| 1. | VENPONGAL MIX..... | 41 |

| | | |
|--|------------------------------|----|
| 2. | TOMATO MIX..... | 42 |
| 3. | BISIBELABATH MIX..... | 43 |
| 4. | PULIYOTHARAI MIX..... | 44 |
| 5. | BIRIYANI MIX..... | 45 |
| VIII. READY TO COOK SWEET MIXES | | |
| 1. | HALWA MIX..... | 46 |
| 2. | ADAI MIX..... | 47 |
| 3. | PAYASAM MIX..... | 48 |
| 4. | SWEET KOLUKATTAI MIX..... | 49 |
| 5. | SWEET PONGAL MIX..... | 50 |
| IX. READY TO COOK SNACK MIXES | | |
| 1. | MURUKKU MIX..... | 51 |
| 2. | RIBBON PAKODA MIX..... | 52 |
| 3. | OMAPODI MIX..... | 53 |
| 4. | VADA MIX..... | 54 |
| 5. | VADAGAM..... | 55 |
| 6. | PAPAD..... | 56 |
| 7. | SMALL MILLET HEALTH MIX..... | 57 |

TECHNICAL BULLETIN ON VALUE ADDED PRODUCTS FROM SMALL MILLETS

Small Millets are one of the oldest food grains known to mankind and possibly the first cereal grain used for domestic purposes. In fact, while it is often called as grain because of grain-like consistency, *millet is actually a seed*. For centuries, Small Millets have been a prized crop in India, used in everything from traditional recipes to snacks and as cereal grain. They can adapt themselves to marginal soils and varied environmental conditions. Small Millets are staple diet for nearly 1/3rd of the world's population. Small Millets are small, round in shape and are white, grey, yellow or red in colour. They are most commonly available in the form of pearled and hulled kind. Small Millets are tasty grains that have a mildly sweet, nut-like flavour. Small Millets are thus an amazing grain offering great opportunities for diversified utilization and value addition. These Small Millets have diversified uses and high food value but the consumption of these Small Millets has declined for want of standardized processing techniques to compete with fine cereals. Hence utilization of small Millets in popular foods would find ready acceptability with the tag of 'health foods'.

Small Millets have immense health benefits. They are good sources of protein, dietary fiber, energy and minerals when compared to rice. The high protein content provides several nutritional and physiological benefits. Grain has promising quantity of essential amino acids such as tryptophan, cystine, methionine with high biological value crucial to health and growth. The low fat and high fibre content helps in preventing obesity, reduces transit time and prevents constipation. The tiny "grain" is gluten-free and packed with vitamins and minerals. Small Millets are rich sources of nutrients which our body needs, such as magnesium, calcium, manganese, phosphorus, iron and antioxidants. Small Millets are considered as low glycemic index foods, which are helpful for diabetics. Small Millets in addition to nutritional benefits are rich in phyto chemicals, including phytic acid, which is believed to lower cholesterol and phytate, which is associated with cancer risk. Dietary fiber protects against hyperglycemia, phytates against oxidation stress by chelating iron involved in Fenton's reaction, and some phenolics and tannins act as antioxidants. They are also valued for natural antioxidants and are gaining importance as complete nutrient source. Small Millets can be used for the preparation of traditional recipes, pasta products, puffed foods, bakery products and instant food mixes.

NUTRITIVE VALUE OF SMALL MILLETS (g/100g)

| S.No. | Small Millets | Protein (g) | Fat (g) | CHO (g) | Energy (Kcal) | Calcium (mg) | Phosphorous (mg) | Iron (mg) | Carotene (µg) | Thiamine (mg) | Riboflavin (mg) |
|-------|-----------------|-------------|---------|---------|---------------|--------------|------------------|-----------|---------------|---------------|-----------------|
| 1. | Pearl millet | 11.6 | 5.0 | 67.5 | 361.0 | 42.0 | 296.0 | 8.0 | 132.0 | 0.33 | 0.25 |
| 2. | Sorghum | 10.4 | 1.9 | 72.6 | 349.0 | 25.0 | 222.0 | 4.1 | 47.0 | 0.37 | 0.13 |
| 3. | Finger millet | 7.3 | 1.3 | 72.0 | 328.0 | 344.0 | 283.0 | 3.9 | 42.0 | 0.42 | 0.19 |
| 4. | Little millet | 7.7 | 4.7 | 67.0 | 341.0 | 17.0 | 220.0 | 9.3 | 0 | 0.30 | 0.09 |
| 5. | Kodo millet | 8.3 | 1.4 | 65.9 | 309.0 | 27.0 | 188.0 | 0.5 | 0 | 0.33 | 0.09 |
| 6. | Foxtail millet | 12.3 | 4.3 | 60.9 | 331.0 | 31.0 | 290.0 | 2.8 | 32.0 | 0.59 | 0.11 |
| 7. | Proso millet | 12.5 | 1.1 | 70.4 | 341.0 | 14.0 | 206.0 | 0.8 | 0 | 0.20 | 0.18 |
| 8. | Barnyard millet | 6.2 | 2.2 | 65.5 | 307.0 | - | 0.33 | 0.10 | 82 | - | - |

I. BREAKFAST RECIPES FROM SMALL MILLETS

1. IDLI

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | - 730 g |
| Black gram dhal | - 250 g |
| Fenugreek seeds | - 20 g |
| Salt | - as required |

Method

- ❖ Soak millet rice and black gram dhal separately for 4 hours and grind coarsely.
- ❖ Add salt, mix it evenly and allow it to ferment overnight.
- ❖ Pour batter into idli plates and steam cook for 10-15 minutes.
- ❖ Serve hot with chutney.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 68.96 | 11.02 | 1.40 | 3.12 | 3.93 | 302.32 | 305.14 |
| Kodo millet | 63.89 | 12.6 | 1.49 | 6.94 | 1.45 | 61.40 | 241.00 |
| Little millet | 65.06 | 11.32 | 4.05 | 6.24 | 8.14 | 13.44 | 211.92 |
| Barnyard millet | 63.10 | 11.1 | 2.08 | 7.52 | 4.73 | 56.30 | 307.00 |

2. DOSA

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | - 730 g |
| Black gram dhal | - 250 g |
| Fenugreek seeds | - 20 g |
| Salt | - as required |

Method

- ❖ Soak small millet rice and black gram dhal separately for 4 hours and grind into fine batter.
- ❖ Add salt, mix it evenly and allow it to ferment overnight.
- ❖ Heat the tawa and grease with oil or ghee.
- ❖ Spread one scoop of batter evenly on the tawa and cook both sides.
- ❖ Serve hot with chutney / sambar.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|----------------------------|----------------|--------------------|----------------|------------------------|------------------|---------------------|------------------------|
| Finger millet | 68.96 | 11.02 | 1.40 | 3.12 | 3.93 | 302.32 | 305.14 |
| Kodo millet | 63.89 | 12.6 | 1.49 | 6.94 | 1.45 | 61.40 | 241.00 |
| Little millet | 65.06 | 11.32 | 4.05 | 6.24 | 8.14 | 13.44 | 211.92 |
| Barnyard millet | 63.10 | 11.1 | 2.08 | 7.52 | 4.73 | 56.30 | 307.00 |

3. PANIYARAM

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | - 450 g |
| Black gram dhal | - 200 g |
| Fenugreek seeds | - 20 g |
| Onion (chopped) | - 150 g |
| Green chilies (chopped) | - 40 g |
| Cumin seeds | - 20 g |
| Curry leaves | - 20 g |
| Oil | - 100 ml |
| Salt | - as required |

Method

- ❖ Soak millet rice, black gram dhal and fenugreek seed separately for 4 hours and grind into the fine batter.
- ❖ Add salt and allow it to ferment overnight.
- ❖ Add all the ingredients (chopped onion and chillies) and mix thoroughly.
- ❖ Apply oil to the paniyaram mould and pour the batter.
- ❖ Cook both sides and serve hot with chutney.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 52.36 | 8.52 | 3.67 | 3.57 | 2.43 | 154.50 | 198.60 |
| Kodo millet | 54.30 | 9.50 | 1.20 | 4.30 | 1.98 | 55.00 | 200.30 |
| Little millet | 45.39 | 8.99 | 1.57 | 5.46 | 3.75 | 14.40 | 233.00 |
| Barnyard millet | 51.50 | 8.23 | 2.85 | 3.41 | 2.82 | 27.50 | 183.50 |

4. IDIAPPAM

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 500 g |
| Sugar | - 250 g |
| Coconut milk | - 250 ml |
| Salt | - 10 g |
| Water | - as required |

Method

- ❖ Steam the Small millet flour for five minutes.
- ❖ Blend steamed flour with salt and water thoroughly.
- ❖ Extrude the dough using idiappam machine and steam for 20-25 minutes
- ❖ Serve hot with coconut milk and sugar.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 72.00 | 7.30 | 1.30 | 3.60 | 3.90 | 344.00 | 283.00 |
| Kodo millet | 60.80 | 5.03 | 11.00 | 4.50 | 0.69 | 20.30 | 129.00 |
| Little millet | 67.00 | 7.00 | 4.70 | 7.60 | 9.30 | 17.13 | 215.12 |
| Barnyard millet | 60.58 | 3.98 | 1.14 | 4.90 | 2.94 | 16.75 | 175.00 |

5. ROTTI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 400 g |
| Raw rice flour | - 200 g |
| Onion (chopped) | - 150 g |
| Green chilies (chopped) | - 70 g |
| Asafoetida | - 30 g |
| Cumin seeds | - 30 g |
| Curry leaves | - 20 g |
| Oil | - 100 ml |
| Salt | - 20 g |
| Water | - as required |

Method

- ❖ Mix Small millet flour and rice flour thoroughly.
- ❖ Add other ingredients with required amount of water and knead to a thick dough consistency.
- ❖ Flatten the dough on pre-heated tawa and cook with oil.
- ❖ Serve it hot.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 51.04 | 5.59 | 1.01 | 2.93 | 3.37 | 251.45 | 209.93 |
| Kodo millet | 47.50 | 5.96 | 11.20 | 4.80 | 2.38 | 90.60 | 139.70 |
| Little millet | 47.79 | 5.85 | 3.22 | 5.53 | 6.88 | 16.14 | 214.89 |
| Barnyard millet | 23.40 | 5.12 | 11.50 | 5.12 | 4.18 | 17.80 | 176.50 |

6. PUTTU

Ingredients

| | |
|--------------------------------------|---------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 600 g |
| Jaggery | - 200 g |
| Shredded coconut | - 200 g |
| Salt | - 20 g |

Method

- ❖ Add required amount of water and salt to Small millet flour and mix it thoroughly without lumps.
- ❖ Steam the flour for 20-25 minutes.
- ❖ Add sugar and shredded coconut.
- ❖ Serve it hot.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 70.21 | 5.93 | 5.13 | 3.06 | 3.11 | 260.80 | 236.40 |
| Kodo millet | 61.14 | 5.96 | 9.18 | 6.12 | 1.14 | 34.20 | 169.00 |
| Little millet | 66.46 | 6.23 | 7.66 | 6.06 | 7.16 | 15.55 | 215.05 |
| Barnyard millet | 60.90 | 4.70 | 9.66 | 6.60 | 3.84 | 16.63 | 224.00 |

7. UPPMA

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rava | - 600 g |
| Onion (chopped) | - 200 g |
| Green chilies (chopped) | - 50 g |
| Oil | - 80 ml |
| Curry leaves | - 20 g |
| Mustard seed | - 10 g |
| Black gram dhal | - 20 g |
| Bengal gram dhal | - 20 g |
| Water | - as required |
| Salt | - as required |

Method

- ❖ Grind millet rice into grits (rava).
- ❖ Roast the rava till it becomes light brown.
- ❖ Fry all the ingredients except rava with oil.
- ❖ Add water, salt and allow it to boil.
- ❖ Add roasted rava slowly with continuous stirring.
- ❖ Cook it for 15-20 minutes.
- ❖ Serve hot with chutney.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 56.78 | 9.22 | 1.52 | 2.70 | 3.55 | 245.14 | 275.58 |
| Kodo millet | 45.40 | 6.91 | 8.84 | 6.07 | 3.13 | 56.30 | 158.00 |
| Little millet | 53.78 | 9.46 | 3.57 | 5.10 | 6.79 | 18.94 | 216.10 |
| Barnyard millet | 45.20 | 5.65 | 9.32 | 6.55 | 3.83 | 18.54 | 213.00 |

8. ADAI

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | - 400 g |
| Red gram dhal | - 150 g |
| Green gram dhal | - 100 g |
| Parboiled rice | - 100 g |
| Chili powder | -30 g |
| Cumin seeds | - 30 g |
| Asafoetida | - 20 g |
| Curry leaves | - 20 g |
| Oil | - 150 ml |
| Salt | - as required |

Method

- ❖ Soak millet rice, red gram dhal, black gram dhal and parboiled rice for 2 hours.
- ❖ Grind the soaked materials into coarse batter.
- ❖ Add red chilli powder, asafoetida, curry leaves, cumin seeds and salt to the batter and mix it thoroughly.
- ❖ Apply oil on the tawa, spread the adai batter and cook.
- ❖ Serve hot with chutney.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 67.07 | 13.50 | 1.97 | 2.56 | 4.08 | 253.30 | 315.30 |
| Kodo millet | 62.25 | 13.10 | 1.90 | 6.35 | 2.58 | 63.00 | 243.00 |
| Little millet | 64.07 | 13.74 | 4.01 | 4.96 | 12.90 | 12.10 | 160.15 |
| Barnyard millet | 62.05 | 12.00 | 2.30 | 6.75 | 4.83 | 80.24 | 289.00 |

9. KITCHADI

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rava | - 500 g |
| Carrot | -50g |
| Beans | - 50g |
| Onion (chopped) | - 200 g |
| Green chilies (chopped) | - 50 g |
| Oil | - 80 ml |
| Curry leaves | - 20 g |
| Mustard seed | - 10 g |
| Black gram dhal | - 20 g |
| Bengal gram dhal | - 20 g |
| Water | - as required |
| Salt | - as required |

Method

- ❖ Grind Small millet rice into grits (rava).
- ❖ Roast the rava till it becomes light brown.
- ❖ Fry all the ingredients except rava with oil.
- ❖ Add water, salt and allow it to boil.
- ❖ Add roasted rava slowly with continuous stirring.
- ❖ Cook it for 15-20 minutes.
- ❖ Serve hot with chutney.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 55.28 | 8.32 | 3.52 | 2.50 | 3.45 | 225.54 | 265.48 |
| Kodo millet | 43.48 | 7.61 | 3.64 | 6.57 | 3.33 | 53.60 | 148.50 |
| Little millet | 51.75 | 8.56 | 3.47 | 5.10 | 5.39 | 17.44 | 236.00 |
| Barnyard millet | 43.60 | 6.95 | 3.92 | 5.45 | 3.43 | 16.34 | 214.50 |

10. CHAPPATHI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 100g |
| Wheat flour | - 25 g |
| Onion | - 20 g |
| Domestic leaves | - 20 g |
| Curry leaves | - 5 g |
| Coriander leaves | - 10 g |
| Green chilies | - 4 no. |
| Cumin seed | - 1 teaspoon |
| Salt | - as required |
| Oil | - as required |

Method

- ❖ Add salt and water to the flour and knead it into soft dough.
- ❖ Make round balls and roll to flat chappathi.
- ❖ Toast the chappathi on a preheated pan.
- ❖ Serve hot with any curry or chutney.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 89.25 | 10.25 | 1.67 | 3.9 | 5.22 | 354.25 | 359.50 |
| Kodo millet | 84.12 | 11.25 | 1.20 | 4.36 | 2.16 | 30.00 | 217.00 |
| Little millet | 84.8 | 10.65 | 5.07 | 7.9 | 10.62 | 27.25 | 296.5 |
| Barnyard millet | 83.90 | 10.85 | 4.50 | 4.68 | 3.96 | 12.20 | 254.00 |

11. KHAKRA

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 500 g |
| Wheat flour | - 500 g |
| Salt | - 20 g |
| Water | - as required |

Method

- ❖ Add salt and water to the flour and knead into soft dough.
- ❖ Make balls (30 g) and roll into round shape.
- ❖ Toast the khakra on a preheated pan, press with a dry cloth and turn frequently.
- ❖ Serve hot with channa masala or dal.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 71.6 | 9.5 | 1.40 | 2.40 | 4.60 | 192.50 | 294.5 |
| Kodo millet | 73.50 | 10.1 | 1.45 | 5.10 | 2.69 | 23.50 | 247.00 |
| Little millet | 69.1 | 9.8 | 3.10 | 4.40 | 7.30 | 29.00 | 260.00 |
| Barnyard millet | 73.55 | 9.0 | 1.85 | 9.50 | 5.15 | 20.50 | 293.00 |

12. SMALL MILLET METHI RICE

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | - 700 g |
| Oil | - 50 g |
| Mustard | -10g |
| Black gram dhal | - 10g |
| Bengal gram dhal | - 10g |
| Methi leaves | - 125g |
| Onion | - 50 g |
| Green chilies | - 20g |
| Lemon juice | - 10 ml |
| Curry leaves | - as required |
| Turmeric | - a pinch |
| Salt | - as required |

Method

- ❖ Cook the rice.
- ❖ Fry all the ingredients except rice.
- ❖ Add rice slowly with continuous stirring.
- ❖ Serve hot with coconut chutney.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 71.10 | 5.41 | 5.46 | 3.56 | 3.43 | 250.80 | 231.45 |
| Kodo millet | 62.54 | 5.68 | 8.26 | 5.82 | 2.34 | 36.80 | 149.00 |
| Little millet | 63.40 | 6.18 | 6.72 | 5.86 | 6.56 | 15.70 | 218.00 |
| Barnyard millet | 64.10 | 4.93 | 8.59 | 6.20 | 3.93 | 14.20 | 214.50 |

II. SWEET RECIPIES

1. SWEET PONGAL

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | -400gm |
| Green gram dhal | -200gm |
| Jaggery/sugar | -300gm |
| Cashew | -50gm |
| Raisins | -50gm |
| Ghee | -as required |
| Cardamom | - as required |

Method

- ❖ Cook Small millet rice and green gram dhal.
- ❖ The pongal in low flame by adding the ghee with continuous stirring.
- ❖ Add roasted cashew nut, cardamom and raisins.
- ❖ Sweet pongal is ready to serve.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 41.85 | 8.84 | 1.81 | 2.26 | 3.23 | 164.00 | 246.80 |
| Kodo millet | 39.41 | 9.24 | 1.85 | 4.42 | 1.87 | 37.12 | 208.80 |
| Little millet | 39.85 | 9.10 | 2.17 | 3.86 | 5.39 | 33.12 | 221.60 |
| Barnyard millet | 39.25 | 8.4 | 1.16 | 4.74 | 3.67 | 26.32 | 245.60 |

2. HALWA

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 200 g |
| Wheat flour | - 100 g |
| Powdered sugar | - 350 g |
| Ghee | - 300 g |
| Cashewnuts | - 50 g |
| Water | - as required |

Method

- ❖ Fry Small millet flour and wheat flour with half the amount of ghee.
- ❖ Add fried flour to the boiled milk and water with continuous stirring to avoid lumps.
- ❖ When it solidifies, add sugar, ghee and cook to the required consistency.
- ❖ Add roasted cashew nuts and raisins when the solid mass leaves the sides of the pan.
- ❖ Spread on a greased tray and cut into pieces.

NUTRIENT CONTENT (per 100g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|----------------------------|----------------|--------------------|----------------|------------------------|------------------|---------------------|------------------------|
| Finger millet | 53.65 | 4.33 | 35.08 | 1.21 | 1.79 | 111.80 | 130.20 |
| Kodo millet | 56.03 | 3.97 | 32.80 | 2.06 | 0.93 | 16.90 | 96.00 |
| Little millet | 52.15 | 4.45 | 36.10 | 2.41 | 3.41 | 13.70 | 111.30 |
| Barnyard millet | 55.95 | 3.55 | 32.90 | 2.22 | 1.83 | 15.50 | 124.00 |

3. SWEET KOLUKATTAI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet flour | - 600 g |
| Jaggery | - 200 g |
| Shredded coconut | - 100 g |
| Roasted bengal gram dhal | - 50 g |
| Sesame seeds | - 50 g |
| Cardamom | - as required |
| Salt | - as required |

Method

- ❖ Add required amount of water and salt to the Small millet flour and mix it thoroughly.
- ❖ Prepare filling by mixing shredded coconut, jaggery and cardamom powder.
- ❖ Flatten the dough on a plantain leaf.
- ❖ Fill the mixture on the dough and fold it.
- ❖ Steam cook the filled dough in *idli* cooker for 15 minutes.
- ❖ Serve it hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 70.13 | 6.09 | 4.35 | 3.39 | 3.54 | 273.40 | 240.65 |
| Kodo millet | 65.30 | 7.97 | 7.48 | 6.41 | 1.99 | 110.00 | 199.70 |
| Little millet | 66.38 | 6.39 | 6.87 | 6.39 | 7.59 | 28.15 | 193.40 |
| Barnyard millet | 65.04 | 6.61 | 8.00 | 6.93 | 4.90 | 30.45 | 198.50 |

4. PAYASAM

Ingredients

| | |
|--|----------|
| Finger millet/ kodo millet/ little millet/ barnyard millet rice | - 300 g |
| Jaggery | - 300 g |
| Cardamom powder | - 20 g |
| Cashew nuts | - 50 g |
| Raisins | - 50 g |
| Ghee | - 80 g |
| Milk | - 200 ml |
| Water | - 350 ml |

Method

- ❖ Boil milk and water for 10 minutes.
- ❖ Add Small millet rice, jaggery and cook for 10 – 15 minutes.
- ❖ Fry cashew nuts and raisins in ghee.
- ❖ Add cardamom powder, fried cashew nuts and raisins to the kheer.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 56.42 | 4.71 | 11.74 | 3.11 | 1.28 | 102.53 | 142.35 |
| Kodo millet | 54.43 | 4.33 | 11.30 | 3.22 | 1.77 | 55.70 | 109.00 |
| Little millet | 56.32 | 5.26 | 12.58 | 3.47 | 1.23 | 52.41 | 126.48 |
| Barnyard millet | 54.30 | 10.80 | 11.30 | 3.46 | 1.37 | 19.80 | 213.12 |

5. ADHIRASAM

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 250g |
| Raw rice flour | - 250g |
| Jaggery | - 500g |
| Cardamom powder | - as required |
| Dry ginger | - as required |
| Water | - as required |
| Oil | - for frying |

Method

- ❖ Mix Small millet flour and raw rice flour thoroughly.
- ❖ Sprinkle little water, mix it thoroughly and keep it for four hours.
- ❖ Mix jaggery with required water and heat to syrup consistency.
- ❖ Add jaggery syrup and stir the flour to make smooth dough.
- ❖ Allow it to ferment overnight at room temperature.
- ❖ Flatten the fermented dough on a greased polythene sheet.
- ❖ Deep fry the flattened dough in hot oil for 2-3 minutes till it turns golden brown.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 82.32 | 3.41 | 0.24 | 2.15 | 18.34 | 108.36 | 125.12 |
| Kodo millet | 83.50 | 3.98 | 0.53 | 2.30 | 16.30 | 49.30 | 107.00 |
| Little millet | 84.21 | 3.27 | 0.81 | 2.43 | 12.42 | 52.31 | 124.24 |
| Barnyard millet | 83.43 | 3.45 | 0.73 | 2.50 | 17.40 | 27.50 | 132.25 |

6. KESARI

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet rava | - 300 g |
| Sugar | - 400 g |
| Milk | - 100 ml |
| Ghee | - 100 g |
| Cashew nuts | - 50 g |
| Raisins | - 50 g |
| Water | - 500 ml |
| Lemon yellow colour | - as required |

Method

- ❖ Heat ghee in a pan, add Small millet rava and fry till it turns light brown.
- ❖ Add sugar, milk and a pinch of required colour to water and allow it to boil for 5-10 minutes.
- ❖ Add Small millet rava to the boiling water with continuous stirring and cook for 15 to 20 minutes.
- ❖ Decorate with cashew nuts and dry fruits and serve it hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 63.21 | 5.34 | 11.25 | 2.63 | 0.85 | 110.50 | 124.30 |
| Kodo millet | 64.90 | 5.05 | 13.20 | 2.82 | 0.95 | 33.90 | 93.80 |
| Little millet | 62.35 | 6.21 | 11.26 | 2.63 | 1.21 | 36.51 | 124.53 |
| Barnyard millet | 64.70 | 11.60 | 13.50 | 3.06 | 2.30 | 25.80 | 121.36 |

7. SWEET ADAI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 400 g |
| Roasted bengal gram flour | - 150 g |
| Green gram flour | - 150 g |
| Jaggery | - 300 g |
| Water | - as required |

Method

- ❖ Prepare jaggery syrup with required amount of water.
- ❖ Add Small millet flour, roasted bengalgram flour, green gram flour to the syrup and mix thoroughly.
- ❖ Knead the mix to a thick consistency.
- ❖ Flatten the dough on a tawa and cook till golden brown colour.
- ❖ Serve it hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 72.34 | 10.52 | 1.32 | 3.62 | 2.86 | 84.62 | 153.40 |
| Kodo millet | 72.57 | 10.50 | 1.55 | 3.87 | 3.01 | 54.80 | 199.00 |
| Little millet | 73.26 | 9.34 | 1.34 | 3.62 | 3.25 | 36.87 | 168.42 |
| Barnyard millet | 72.40 | 9.66 | 1.86 | 4.19 | 4.81 | 17.56 | 205.14 |

8. MLLET BOLI

Ingredients

Refined wheat flour - 500g
Salt - 1 pinch
Water - as required.

Stuffing

Finger millet/ kodo millet/
little millet/ barnyard millet rava - 100g
Sugar - 150g
Ghee - 40g
Cardamom - 10g
Water - 1 cup

Method

- ❖ Mix refined wheat flour with required amount of water to thick dough consistency.
- ❖ Make balls and roll it in to round shape in polythene sheet.
- ❖ Add sugar, cardamom and ghee to the Small millet rava and cook till the mix does not stick to the sides of the pan.
- ❖ Fill the mixture on the dough sheet, fold it and roll as thin as possible.
- ❖ Toast the boli on a preheated tawa.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 86.24 | 8.30 | 3.30 | 3.62 | 3.84 | 354 | 295.35 |
| Kodo millet | 75.90 | 10.30 | 3.40 | 7.65 | 1.53 | 47.32 | 195.36 |
| Little millet | 76.25 | 9.70 | 5.73 | 7.63 | 8.26 | 29.35 | 245.68 |
| Barnyard millet | 85.60 | 8.20 | 4.56 | 8.32 | 4.23 | 26.42 | 238.24 |

III. SNACKS

1. VADA

Ingredients

| | |
|--|---------------|
| Finger millet/ kodo millet/ little millet/ barnyard millet rice | - 500 g |
| Bengal gram dhal | - 250 g |
| Onion (chopped) | - 150 g |
| Green chilies (chopped) | - 80 g |
| Curry leaves | - 20 g |
| Salt | - as required |
| Oil | - for frying |

Method

- ❖ Soak millet rice and bengal gram dhal for 4 hours and grind coarsely to thick consistency.
- ❖ Mix all the ingredients into the dough.
- ❖ Make small round balls and flattened on a greased polythene sheet.
- ❖ Deep fry the dough in hot oil till they turn golden brown in colour.
- ❖ Serve hot with chutney.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 58.38 | 16.96 | 2.52 | 2.05 | 3.66 | 223.88 | 322.63 |
| Kodo millet | 51.40 | 9.97 | 2.19 | 5.56 | 2.13 | 52.50 | 193.00 |
| Little millet | 56.88 | 17.08 | 2.31 | 3.25 | 5.28 | 11.88 | 303.73 |
| Barnyard millet | 51.20 | 8.92 | 2.59 | 5.96 | 4.38 | 49.00 | 239.00 |

2. PAKODA

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 750 g |
| Onion (chopped) | - 150 g |
| Green chilies (chopped) | - 50 g |
| Cumin seeds | - 30 g |
| Curry leaves | - 20 g |
| Salt | - as required |
| Water | - as required |
| Oil | - for frying |

Method

- ❖ Add all the ingredients and water to the flour and make it into thick dough.
- ❖ Deep fry the dough in hot oil in different shapes.
- ❖ Serve hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 62.62 | 6.28 | 25.93 | 2.76 | 2.95 | 244.00 | 225.47 |
| Kodo millet | 52.90 | 7.33 | 1.57 | 7.67 | 1.15 | 76.75 | 170.00 |
| Little millet | 59.12 | 6.56 | 28.38 | 5.56 | 6.73 | 15.10 | 181.37 |
| Barnyard millet | 49.40 | 5.44 | 2.06 | 7.78 | 4.27 | 70.50 | 225.00 |

3. RIBBON PAKODA

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 900 g |
| Butter | - 50 g |
| Chili powder | - 30 g |
| Sesame seeds | - 20 g |
| Salt | - as required |
| Water | - as required |
| Oil | - for frying |

Method

- ❖ Add all the ingredients to the flour and mix it thoroughly.
- ❖ Prepare the dough by adding water.
- ❖ Extrude the dough in a hand extruder and deep fry in hot oil till they turn golden brown colour.
- ❖ Extrude the dough in a hand extruder through ribbon pakoda dye.
- ❖ Deep fry the extruded ribbon pakoda till they turn golden brown.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 65.20 | 6.52 | 6.21 | 12.25 | 3.15 | 175.68 | 225.20 |
| Kodo millet | 60.76 | 8.32 | 6.37 | 9.07 | 0.71 | 58.10 | 192.00 |
| Little millet | 61.87 | 7.51 | 1.54 | 3.42 | 3.54 | 13.24 | 268.65 |
| Barnyard millet | 60.40 | 6.43 | 70.90 | 9.79 | 4.76 | 51.80 | 274.00 |

4. HOT KOLUKATTAI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 600 g |
| Onion (chopped) | - 150 g |
| Green chilies (chopped) | - 50 g |
| Curry leaves | - 20 g |
| Coriander leaves | - 20 g |
| Asafoetida | - 20 g |
| Mustard seed | - 20 g |
| Black gram dhal | - 20 g |
| Oil | - 100 ml |
| Salt | - as required |
| Water | - as required |

Method

- ❖ Add required quantity of water to the Small millet flour and mix thoroughly without lumps.
- ❖ Season the ingredients and add to the Small millet flour mix.
- ❖ Boil the mix with continuous stirring till it reaches a thick dough consistency.
- ❖ Form the dough into oval shapes and steam cook for 15-20 minutes in *idli* cooker.
- ❖ Serve hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|--------------|-----------------|-----------|--------------|-----------------|
| Finger millet | 46.21 | 6.32 | 11.25 | 6.14 | 1.59 | 98.34 | 124.60 |
| Kodo millet | 45.11 | 6.55 | 11.90 | 6.12 | 1.78 | 70.70 | 151.00 |
| Little millet | 42.85 | 5.37 | 11.24 | 5.81 | 1.68 | 54.82 | 142.36 |
| Barnyard millet | 44.87 | 5.29 | 12.30 | 6.60 | 4.48 | 66.46 | 206.00 |

5. MURUKKU

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 850 g |
| Chili powder | - 30 g |
| Sesame seeds | - 30 g |
| Cumin seeds | - 20 g |
| Asafoetida | - 20 g |
| Butter | - 50 g |
| Salt | - as required |
| Water | - as required |
| Oil | - for frying |

Method

- ❖ Add all the ingredients to the flour and mix uniformly.
- ❖ Prepare thick dough by adding required water.
- ❖ Extrude the dough in hot oil using a hand extruder.
- ❖ Deep fry in hot oil till it turns golden brown in colour.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 67.53 | 7.83 | 6.67 | 12.52 | 3.04 | 178.90 | 228.42 |
| Kodo millet | 56.50 | 8.12 | 6.98 | 8.52 | 1.77 | 105.00 | 189.80 |
| Little millet | 65.53 | 8.37 | 8.07 | 4.12 | 5.20 | 13.15 | 203.22 |
| Barnyard millet | 56.20 | 6.44 | 7.62 | 9.16 | 5.37 | 99.70 | 263.00 |

6. OMAPODI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 800g |
| Rice flour | - 160g |
| Chili powder | - 20g |
| Pepper powder | - 20g |
| Salt | - to taste |
| Water | - as required |

Method

- ❖ Mix together Small millet flour, rice flour and sieve.
- ❖ Prepare thick dough by adding required water
- ❖ Extrude the dough in a hand extruder through omapodi dye.
- ❖ Deep fry the extruded omapodi till they turn golden brown.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 69.37 | 10.68 | 2.73 | 3.87 | 4.55 | 266.75 | 279.24 |
| Kodo millet | 68.26 | 10.57 | 2.85 | 3.45 | 3.59 | 46.85 | 185.64 |
| Little millet | 66.62 | 10.90 | 4.65 | 6.07 | 7.52 | 14.90 | 244.59 |
| Barnyard millet | 63.12 | 11.84 | 3.45 | 5.84 | 6.42 | 24.31 | 154.32 |

7. THATTU VADAI

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 800 g |
| Roasted bengal gram dhal | - 100 g |
| Butter | - 50 g |
| Chili powder | - 30 g |
| Curry leaves | - 20 g |
| Salt | - 20 g |
| Water | - as required |
| Oil | - for frying |

Method

- ❖ Add all the ingredients to the flour and mix thoroughly.
- ❖ Prepare thick dough by adding required water.
- ❖ Flatten the dough to thin round shapes on a polythene sheet.
- ❖ Deep fry it in hot oil till they turn golden brown.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 49.18 | 6.46 | 31.34 | 2.28 | 2.87 | 278.24 | 202.90 |
| Kodo millet | 59.85 | 9.49 | 5.90 | 8.34 | 1.44 | 48.80 | 197.00 |
| Little millet | 46.18 | 6.70 | 33.38 | 4.80 | 6.11 | 15.80 | 165.10 |
| Barnyard millet | 59.50 | 7.81 | 6.54 | 8.98 | 5.04 | 43.20 | 270.00 |

8. SEEDAI

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet rava | - 600g |
| Black gram flour | -200g |
| Jaggery | -200g |
| Cardamom | -5 No. |
| Ghee | - to fry |
| Sesame | - as required |
| Water | - as required |

Method

- ❖ Mix the roasted Small millet rava with black gram flour.
- ❖ Add powdered cardamom and sesame to the mix.
- ❖ Add sugar syrup and mix with the seedai mix.
- ❖ Make small balls and fry it in hot oil or ghee.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 63.00 | 6.89 | 3.71 | 3.38 | 3.53 | 220.00 | 165.50 |
| Kodo millet | 69.95 | 7.39 | 3.77 | 4.08 | 1.83 | 61.50 | 118.00 |
| Little millet | 60.50 | 8.09 | 3.41 | 5.38 | 5.18 | 56.50 | 154.00 |
| Barnyard millet | 59.75 | 7.34 | 3.16 | 4.48 | 4.08 | 48.00 | 164.00 |

9. SMALL MILLET VEGETABLE PAKODA

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 250g |
| Bengal gram flour | - 75g |
| Carrot, beans, peas | - 50 g |
| Onion | - 75g |
| Green chilies | - 6 no. |
| Curry leaves | - as required |
| Coriander leaves | - as required |
| Oil | - as required |
| Salt | - as required |

Method

- ❖ Add all the ingredients and water to the flour and make it into thick dough.
- ❖ Deep fry the dough in different shapes in hot oil.
- ❖ Serve it hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 63.20 | 7.52 | 6.21 | 2.25 | 3.15 | 145.68 | 215.20 |
| Kodo millet | 61.76 | 8.42 | 6.37 | 4.35 | 0.71 | 51.50 | 178.00 |
| Little millet | 61.72 | 7.15 | 1.54 | 3.12 | 3.54 | 11.98 | 228.65 |
| Barnyard millet | 60.80 | 6.73 | 70.90 | 3.49 | 4.76 | 57.40 | 264.50 |

IV. PUFFED PRODUCTS

1. SMALL MILLET POPCORN

Ingredients

Finger millet/ kodo millet/
little millet/ barnyard millet - 250g
Water - as required

Method

- ❖ Soak the Small Millets for 1 to 2 hours.
- ❖ Drain the water and temper the grains for 30 minutes.
- ❖ The tempered grains were surface dried for 1 hr.
- ❖ Evenly grained, processed sand was heated in a kadai to a temperature of 270°C.
- ❖ The Small Millets were puffed till the process was complete.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 72.00 | 7.30 | 1.30 | 3.6 | 3.90 | 344.00 | 283.00 |
| Kodo millet | 65.90 | 8.30 | 1.40 | 9.0 | 0.50 | 27.00 | 188.00 |
| Little millet | 67.00 | 7.70 | 4.70 | 7.6 | 9.30 | 17.00 | 220.00 |
| Barnyard millet | 65.50 | 6.20 | 2.20 | 9.8 | 5.00 | 12.30 | 280.00 |

V. PASTA PRODUCTS FROM SMALL MILLETS

1. VERMICELLI

Ingredients

| | |
|---|------------|
| Refined wheat flour | - 80g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 20g |
| Water | - 30 ml |
| Salt | - to taste |

Method

- ❖ Sieve refined wheat flour and Small millet flour blends in a BS 60 mesh sieve.
- ❖ Add water, salt and knead the flour into smooth soft dough.
- ❖ Keep it for 30 minutes and extrude using a hand extruder.
- ❖ Steam the vermicelli for 5 minutes.
- ❖ Dry the vermicelli and pack in airtight bags/containers.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 62.00 | 5.43 | 0.85 | 2.11 | 2.90 | 312.00 | 253.00 |
| Kodo millet | 60.40 | 7.24 | 0.96 | 2.24 | 0.50 | 22.00 | 148.00 |
| Little millet | 60.12 | 6.37 | 0.87 | 1.42 | 6.30 | 14.50 | 187.00 |
| Barnyard millet | 60.24 | 5.18 | 0.78 | 1.15 | 4.54 | 11.13 | 227.00 |

2. MACARONI

Ingredients

Finger millet/ kodo millet/

little millet/ barnyard millet flour - 200 g

Refined wheat flour - 800 g

Salt - as required

Method

- ❖ Add water and knead the flour into smooth soft dough.
- ❖ Cook this dough for five minutes.
- ❖ Press this dough using hand extruder.
- ❖ Dry the macaroni and pack in airtight bags/containers.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 62.00 | 5.43 | 0.85 | 2.11 | 2.90 | 312.00 | 253.00 |
| Kodo millet | 60.40 | 7.24 | 0.96 | 2.24 | 0.50 | 22.00 | 148.00 |
| Little millet | 60.12 | 6.37 | 0.87 | 1.42 | 6.30 | 14.50 | 187.00 |
| Barnyard millet | 60.24 | 5.18 | 0.78 | 1.15 | 4.54 | 11.13 | 227.00 |

VI. BAKERY PRODUCTS FROM SMALL MILLETS

1. SMALL MILLET BREAD

Ingredients

| | |
|---|--------|
| Refined wheat flour | - 800g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 200g |
| Sugar | - 170g |
| Fat | - 20 g |
| Salt | - 20g |

Yeast liquid

| | |
|------------|---------|
| Sugar | - 10g |
| Warm water | - 500ml |
| Yeast | - 30g |

Method

- ❖ Prepare yeast liquid by dissolving the sugar in the water. Sprinkle the yeast. Leave for 10-15 minutes until fluffy.
- ❖ Rub fat into flour add salt and yeast liquid. Prepare dough.
- ❖ Turn onto lightly floured board and knead till soft and elastic (20 minutes for kneading).
- ❖ Cover and leave to rise. Remove and knead lightly. Grease 2 bread tins.
- ❖ Divide dough into two. Stretch each piece as oblong, the same width as tin and fold over in three.
- ❖ With the seam underneath, smooth over top, tuck in ends and place in tin.
- ❖ Place in a covered vessel or greased bag and leave to rise (20 to 30 minutes).
- ❖ Bake in a very hot oven for 30 to 40 minutes at 200°C.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 72.56 | 8.36 | 2.91 | 1.36 | 2.13 | 126.82 | 220.60 |
| Kodo millet | 74.79 | 8.69 | 2.90 | 1.31 | 1.96 | 21.54 | 185.85 |
| Little millet | 74.58 | 8.59 | 3.76 | 1.46 | 3.36 | 19.88 | 175.52 |
| Barnyard millet | 73.96 | 9.35 | 3.24 | 1.53 | 2.28 | 22.21 | 154.50 |

2. SMALL MILLET BUN

Ingredients

| | |
|---|------------------------------|
| Refined wheat flour | - 800g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 200g |
| Water | - 500ml |
| Milk | - 20g or Milk powder - 100ml |
| Yeast | - 20g |
| Sugar | - 200g |
| Salt | - 15g |
| Fat | - 30g |

Method

- ❖ Yeast liquid: yeast with little warm water and pinch of sugar.
- ❖ Mix sugar and salt in the remaining milk.
- ❖ Mix flour, milk powder and make a well in the centre.
- ❖ Add soften yeast froth and sugar and salt mixed water.
- ❖ Knead to soft dough. Incorporate fat while kneading.
- ❖ Leave the dough for proofing. Knock back and knead lightly.
- ❖ Divide into 60g balls and leave it for rising.
- ❖ Glaze it with egg and bake at 200°C for 10 to 15 minutes.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 56.42 | 4.58 | 2.58 | 1.15 | 1.46 | 154.50 | 162.70 |
| Kodo millet | 62.68 | 5.45 | 2.64 | 1.07 | 1.67 | 17.00 | 196.00 |
| Little millet | 60.52 | 4.25 | 2.83 | 1.65 | 1.69 | 17.33 | 152.00 |
| Barnyard millet | 62.41 | 4.79 | 2.15 | 1.77 | 1.38 | 20.20 | 147.00 |

3. SMALL MILLET BISCUIT

Ingredients

| | |
|---|--------------|
| Refined wheat flour | - 500g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 500g |
| Fat | - 400g |
| Sugar | - 250g |
| Baking powder | - ¼ teaspoon |

Method

- ❖ Sieve flour with baking powder.
- ❖ Cream, fat and sugar till light and fluffy.
- ❖ Sieved flour is mixed to the above cream.
- ❖ Make smooth dough necessary.
- ❖ Sheet the dough and cut with the biscuit cutter.
- ❖ Bake at 160°C for about 15 minutes.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 63.52 | 6.58 | 21.58 | 3.65 | 1.86 | 186.50 | 152.75 |
| Kodo millet | 66.48 | 6.45 | 20.74 | 3.07 | 1.47 | 19.04 | 186.50 |
| Little millet | 66.85 | 6.25 | 21.87 | 2.65 | 4.03 | 15.73 | 156.00 |
| Barnyard millet | 64.81 | 7.79 | 21.73 | 2.77 | 1.86 | 20.40 | 146.50 |

4. SMALL MILLET CAKE

Ingredients

| | |
|---|---------------|
| Refined wheat flour | - 700g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 300g |
| Sugar | - 800g |
| Fat | - 800g |
| Egg | - 20 No. |
| Vanilla essence | - a few drops |
| Baking powder | - 1 teaspoon |

Method

- ❖ Sieve flour and baking powder twice.
- ❖ Cream fat and sugar till light and fluffy.
- ❖ Beat the egg with vanilla essence.
- ❖ Fold in flour.
- ❖ Prepare cake batter.
- ❖ Pour it in the tins and bake at 190°C for 20 minutes.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 63.52 | 8.28 | 21.78 | 2.65 | 1.26 | 176.50 | 182.75 |
| Kodo millet | 66.48 | 8.65 | 20.24 | 2.57 | 1.67 | 18.04 | 176.50 |
| Little millet | 66.85 | 8.75 | 21.97 | 2.45 | 4.13 | 16.73 | 154.00 |
| Barnyard millet | 64.81 | 8.62 | 21.63 | 2.37 | 1.80 | 29.50 | 143.50 |

5. SMALL MILLET DOUGH NUT

Ingredients

| | |
|---|--------------|
| Refined wheat flout | - 800g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 200g |
| Baking powder | - 1 teaspoon |
| Dalda | - 30g |
| Egg | - 1 No. |
| Salt | - 15 g |
| Yeast liquid | |
| Yeast | - 30g |
| Water | - 500ml |
| Sugar | - 150g |
| Oil | - to fry |

Method

- ❖ Warm the water, add sugar and sprinkle yeast on the top.
- ❖ Allow it to rise for 5 to 10 minutes.
- ❖ Mix warm milk, sugar and salt. Sieve flour and make a shallow centre.
- ❖ Add egg, yeast liquid, sugar and salt.
- ❖ Add milk and prepare soft dough.
- ❖ Mix in fat while kneading.
- ❖ Allow it to rise to a double volume for one hour.
- ❖ Roll out 1.3rd of an inch. Cut with a doughnut cutter.
- ❖ Fry in medium heated oil till golden brown in colour.
- ❖ Roll in powdered sugar.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 64.00 | 6.43 | 3.85 | 1.11 | 1.90 | 196.00 | 263.00 |
| Kodo millet | 61.40 | 6.24 | 3.96 | 1.24 | 0.80 | 21.00 | 144.00 |
| Little millet | 62.12 | 6.67 | 4.87 | 1.42 | 0.78 | 15.50 | 180.00 |
| Barnyard millet | 63.24 | 5.98 | 4.78 | 1.15 | 1.54 | 14.13 | 212.00 |

6. SMALL MILLET BREAD ROLL

Ingredients

| | |
|---|--------|
| Refined wheat flour | - 800g |
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 200g |
| Dalda | - 20 g |
| Salt | - 15g |

Yeast liquid

| | |
|------------|---------|
| Sugar | - 180g |
| Warm water | - 500ml |
| Yeast | - 20g |

Method

- ❖ Prepare bread dough used for preparing rolls.
- ❖ Divide dough into 60g pieces.
- ❖ Roll into various shapes.
- ❖ Place on greased trays and leave to rise (30 minutes).
- ❖ Glaze and bake in hot oven for 15 to 20 minutes.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 60.00 | 6.40 | 3.25 | 0.98 | 1.64 | 145.00 | 243.00 |
| Kodo millet | 62.30 | 6.36 | 3.16 | 0.94 | 0.92 | 17.00 | 154.00 |
| Little millet | 63.10 | 6.51 | 4.17 | 1.12 | 0.89 | 13.50 | 187.00 |
| Barnyard millet | 64.14 | 5.86 | 4.28 | 0.96 | 1.21 | 11.53 | 226.00 |

VII. INSTANT SMALL MILLET MIXES

Preparation of Quick Cooking Small Millets

- ❖ Clean, wash and pearl the Small Millets.
- ❖ Dry the grains in a cabinet drier at 60°C for six hours.
- ❖ Pack the dried grains in airtight bags/ containers.

Preparation of Dehydrated Vegetables

- ❖ Select fresh and firm vegetables.
- ❖ Wash the vegetables in running tap water.
- ❖ Cut the vegetables into small pieces of uniform size.
- ❖ Steam blanch all the vegetables for 3- 5 minutes except onions and tomatoes.
- ❖ Dry all the vegetables in cabinet drier at 60°C for 6 hours separately.
- ❖ Pack the dehydrated vegetables separately in air tight bags/containers.
- ❖ Use as required for the recipe.

1. VENPONGAL MIX

Ingredients

| | |
|--------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet | - 500g |
| Green gram dhal | - 250 g |
| Cashew nut | - 100 g |
| Curry leaves | - 20 g |
| Cumin seeds | - 50 g |
| Pepper | - 50 g |
| Ginger | - 30 g |
| Oil | - 10 ml |
| Salt | - as required |

Method

- ❖ Mix all the ingredients in 10 ml of oil.
- ❖ Pack in airtight bags or container.
- ❖ Cook one part of instant pongal mix with three parts of water.
- ❖ Serve hot with chutney or sambar.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 51.82 | 10.84 | 4.81 | 2.26 | 3.23 | 194.00 | 216.80 |
| Kodo millet | 59.45 | 9.84 | 4.85 | 4.42 | 1.87 | 36.12 | 258.80 |
| Little millet | 59.84 | 9.90 | 4.57 | 3.86 | 5.39 | 38.42 | 241.00 |
| Barnyard millet | 59.45 | 10.40 | 4.76 | 4.74 | 3.67 | 22.53 | 215.00 |

2. TOMATO MIX

Ingredients

| | |
|---|---------------|
| Finger millet/ kodo millet/ little millet/ barnyard millet | - 500 g |
| Tomato | - 300 g |
| Onion | - 100 g |
| Green chilies | - 50 g |
| Curry leaves | - 20 g |
| Ginger | - 10 g |
| Turmeric | - 20 g |
| Salt | - as required |
| Oil | - 10 ml |

Method

- ❖ Mix all the ingredients in 10 ml of oil.
- ❖ Pack in airtight bags or container.
- ❖ Cook one part of instant tomato mix with three parts of water.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 50.28 | 8.84 | 2.87 | 2.16 | 3.43 | 152.00 | 243.00 |
| Kodo millet | 53.25 | 7.84 | 2.81 | 3.42 | 1.47 | 32.12 | 218.00 |
| Little millet | 55.56 | 8.20 | 2.17 | 3.26 | 5.59 | 28.40 | 221.00 |
| Barnyard millet | 57.40 | 8.30 | 2.36 | 3.70 | 3.97 | 21.43 | 218.00 |

3. BISIBELABATH MIX

Ingredients

| | |
|--------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet | - 550 g |
| Red gram dhal | - 50 g |
| Bengal gram dhal | - 50 g |
| Coriander | - 20 g |
| Fenugreek | - 10 g |
| Turmeric powder | - 10 g |
| Brinjal | - 50 g |
| Carrot | - 50 g |
| Beans | - 50 g |
| Potato | - 50 g |
| Onion | - 50g |
| Green chili | - 10g |
| Tomato | - 50 g |
| Oil | - 10ml |
| Salt | - as required |

Method

- ❖ Mix all the ingredients in 10 ml of oil.
- ❖ Pack in airtight bags or container.
- ❖ Cook one part of instant Bisibelabath mix with three parts of water.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 58.32 | 4.31 | 6.74 | 3.25 | 1.38 | 126.50 | 186.35 |
| Kodo millet | 55.63 | 4.63 | 5.30 | 3.63 | 1.70 | 56.80 | 169.00 |
| Little millet | 58.62 | 5.60 | 5.60 | 3.76 | 1.46 | 56.25 | 136.80 |
| Barnyard millet | 55.80 | 5.80 | 6.26 | 3.68 | 1.53 | 26.51 | 186.50 |

4. PULIYOTHARAI MIX

Ingredients

| | |
|---|---------------|
| Finger millet/ kodo millet/ little millet/ barnyard millet | - 500g |
| Tamarind powder | - 200g |
| Chili powder | - 50g |
| Bengal gram dhal | - 100g |
| Black gram dhal | - 100g |
| Turmeric | - 50g |
| Oil | - 10 ml |
| Salt | - as required |

Method

- ❖ Mix all the ingredients in 10 ml of oil.
- ❖ Pack in airtight bags or container.
- ❖ Cook one part of instant puliyotharai mix with three parts of water.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 56.42 | 4.36 | 11.62 | 3.31 | 1.18 | 132.54 | 152.35 |
| Kodo millet | 54.35 | 4.39 | 11.42 | 3.22 | 1.78 | 58.70 | 125.00 |
| Little millet | 56.52 | 4.86 | 11.48 | 3.40 | 1.43 | 56.47 | 138.50 |
| Barnyard millet | 54.36 | 5.21 | 10.60 | 3.48 | 1.97 | 20.30 | 113.50 |

5. BIRIYANI MIX

Ingredients

| | |
|---|---------------|
| Finger millet/ kodo millet/ little millet/ barnyard millet | - 500g |
| Carrot | - 50g |
| Beans | - 50g |
| Peas | - 50g |
| Onion | - 50g |
| Tomato | - 50g |
| Curry leaves | - 20g |
| Chili powder | - 50g |
| Cloves | - 20g |
| Garlic | - 50g |
| Turmeric | - 10g |
| Mint | - 50g |
| Ginger | - 50g |
| Oil | - 10ml |
| Salt | - as required |

Method

- ❖ Mix all the ingredients in 10 ml of oil.
- ❖ Pack in airtight bags or container.
- ❖ Cook one part of instant Biryani mix with three parts of water.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 64.43 | 6.43 | 6.64 | 5.52 | 3.44 | 168.50 | 248.00 |
| Kodo millet | 55.80 | 6.72 | 6.48 | 6.22 | 2.47 | 65.00 | 179.50 |
| Little millet | 63.50 | 6.47 | 8.47 | 5.12 | 4.40 | 43.50 | 153.52 |
| Barnyard millet | 51.50 | 5.84 | 7.64 | 5.36 | 4.37 | 79.50 | 223.00 |

VIII. READY TO COOK SWEET MIXES

Preparation of Small millet flour

- Grind the dried grains to powder form in a pulverizer.
- Sieve the flour through BS36 sieve.
- Pack the flour in airtight bags /container.

1. HALWA MIX

Ingredients

Finger millet/ kodo millet/

little millet/ barnyard millet flour - 350 g

Sugar - 400 g

Milk - 100 ml

Orange colour - 10 pinch

Cashew nuts - 50 g

Ghee - 100 g

Instant mix

- Mix all the ingredients thoroughly except milk and ghee.
- Pack in airtight polythene bags/containers.

Preparation

- ❖ Add one part of halwa mix in milk.
- ❖ Mix thoroughly without lumps.
- ❖ Melt butter in a hot tawa.
- ❖ Cook the mix in low flame by adding ghee with continuous stirring.
- ❖ Cook, till the mix does not stick to sides of the pan.
- ❖ Spread on a greased tray, allow cooling.
- ❖ Decorate with roasted cashew nuts.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 50.15 | 3.53 | 33.08 | 1.25 | 1.29 | 118.00 | 150.50 |
| Kodo millet | 52.23 | 3.47 | 32.80 | 2.56 | 1.24 | 18.00 | 94.00 |
| Little millet | 53.25 | 3.65 | 35.70 | 2.73 | 2.85 | 15.50 | 102.30 |
| Barnyard millet | 54.65 | 3.75 | 35.50 | 2.02 | 1.96 | 16.00 | 154.00 |

2. ADAI MIX

Ingredients

Finger millet/ kodo millet/
 little millet/ barnyard millet flour - 600 g
 Roasted bengal gram flour - 50 g
 Green gram flour - 150g

Instant mix

- ❖ Mix all the ingredients thoroughly.
- ❖ Pack in airtight bags/containers.

Method

- ❖ Mix Small millet adai mix with required water to thick dough consistency.
- ❖ Flatten the dough on a tawa and cook both sides.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 67.57 | 12.80 | 1.97 | 2.50 | 3.08 | 243.36 | 253.40 |
| Kodo millet | 62.35 | 11.90 | 1.90 | 3.35 | 2.58 | 23.60 | 224.00 |
| Little millet | 64.72 | 13.54 | 2.81 | 2.75 | 2.90 | 42.50 | 180.50 |
| Barnyard millet | 62.75 | 12.30 | 2.35 | 3.45 | 4.83 | 20.40 | 219.00 |

3. PAYASAM MIX

Ingredients

| | | |
|--|---|-------------|
| Finger millet/ kodo millet/ little millet/ barnyard millet vermicelli | - | 400 g |
| Sugar | - | 400 g |
| Milk | - | 100 ml |
| Cashew nut | - | 50 g |
| Raisins | - | 50 g |
| Ghee | - | as required |
| Cardamom | - | 10 nos. |

Instant mix

- ❖ Mix all the ingredients thoroughly, except milk and ghee.
- ❖ Pack in airtight bags/containers.

Method

- ❖ Add Small millet vermicelli and sugar to boiling milk.
- ❖ Cook for 10-15 minutes.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 55.32 | 4.29 | 12.54 | 2.11 | 1.36 | 152.00 | 156.00 |
| Kodo millet | 55.53 | 4.37 | 15.36 | 2.22 | 1.70 | 55.62 | 129.00 |
| Little millet | 58.30 | 5.22 | 12.68 | 2.57 | 1.25 | 55.60 | 129.53 |
| Barnyard millet | 56.90 | 5.36 | 11.36 | 2.40 | 1.65 | 26.00 | 280.36 |

4. SWEET KOLUKATTAI MIX

Ingredients

| | |
|--------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| little millet/ barnyard millet flour | - 600 g |
| Jaggery | - 200 g |
| Shredded coconut | - 100 g |
| Roasted bengal gram dhal | - 50 g |
| Sesame seeds | - 50 g |
| Cardamom | - as required |
| Salt | - as required |

Method

- ❖ Mix all the ingredients thoroughly, except milk and ghee.
- ❖ Pack in airtight bags/containers.

Preparation

- ❖ Add one part of water to one part of kolukattai mix and mix well, to a thick dough consistency.
- ❖ Allow it to stand for 20 minutes.
- ❖ Make kolukattai shapes and steam for 5-10 minutes.
- ❖ Serve hot.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 69.52 | 5.62 | 3.62 | 2.65 | 1.83 | 186.90 | 216.00 |
| Kodo millet | 64.26 | 5.83 | 3.50 | 2.13 | 2.63 | 69.58 | 253.50 |
| Little millet | 63.42 | 5.61 | 3.12 | 2.68 | 2.15 | 23.50 | 241.00 |
| Barnyard millet | 62.53 | 5.86 | 3.06 | 2.41 | 1.82 | 24.50 | 223.50 |

5. SWEET PONGAL MIX

Ingredients

| | |
|-------------------------------------|---------------|
| Finger millet/ kodo millet/ | |
| Little millet/ barnyard millet rice | -400gm |
| Green gram dhal | -200gm |
| Jaggery/sugar | -300gm |
| Cashew | -50gm |
| Raisins | -50gm |
| Ghee | -as required |
| Cardamom | - as required |

Instant mix

- ❖ Mix all the ingredients thoroughly, except ghee.
- ❖ Pack in airtight bags/containers.

Method

- ❖ Add one part of sweet pongal mix to two parts water and cook.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 72.13 | 6.70 | 4.85 | 3.39 | 2.54 | 264540 | 246.60 |
| Kodo millet | 65.50 | 7.70 | 6.48 | 6.41 | 1.99 | 90.00 | 189.50 |
| Little millet | 64.48 | 5.98 | 5.87 | 6.39 | 2.59 | 27.50 | 194.50 |
| Barnyard millet | 62.54 | 6.68 | 7.69 | 6.93 | 2.90 | 28.40 | 188.50 |

IX. READY TO COOK SNACK MIXES

1. MURUKKU MIX

Ingredients

| | | |
|--------------------------------------|---|-------------|
| Finger millet/ kodo millet/ | | |
| little millet/ barnyard millet flour | - | 750 g |
| Bengal gram flour | - | 130 g |
| Chili Powder | - | 20 g |
| Sesame seeds | - | 50g |
| Butter | - | 50 g |
| Salt | - | as required |
| Oil | - | as required |

Instant mix

- ❖ Mix all the ingredients thoroughly.
- ❖ Pack in airtight bags/containers.

Method

- ❖ Mix the Small millet murukku mix with hydrogenated fat and required amount of water.
- ❖ Press the dough in a hand extruder using required murukku shape dyes in oil (180°C).
- ❖ Deep fry them in medium flame till they turn golden brown colour.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 59.35 | 6.95 | 5.62 | 7.54 | 3.24 | 186.50 | 221.30 |
| Kodo millet | 55.34 | 7.62 | 6.41 | 6.42 | 1.68 | 112.60 | 196.50 |
| Little millet | 65.42 | 8.26 | 8.15 | 3.84 | 5.34 | 15.62 | 211.60 |
| Barnyard millet | 52.62 | 5.86 | 6.82 | 7.30 | 4.61 | 76.20 | 264.30 |

2. RIBBON PAKODA MIX

Ingredients

Finger millet/ kodo millet/

| | | |
|--------------------------------------|---|-------------|
| little millet/ barnyard millet flour | - | 750 g |
| Bengal gram flour | - | 130 g |
| Chili powder | - | 20 g |
| Sesame seeds | - | 50 g |
| Butter | - | 50 g |
| Salt | - | as required |
| Oil | - | as required |

Instant mix

- ❖ Mix all the ingredients thoroughly.
- ❖ Pack in airtight bags/containers.

Method

- ❖ Mix the Small millet pakoda mix with hydrogenated fat and required amount of water.
- ❖ Press the dough in a hand extruder using ribbon pakoda shape dye.
- ❖ Deep fry in hot oil till they turn golden brown colour.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 68.23 | 6.81 | 6.38 | 2.34 | 2.86 | 169.51 | 224.80 |
| Kodo millet | 61.72 | 8.65 | 6.95 | 7.86 | 1.54 | 69.72 | 162.43 |
| Little millet | 62.62 | 7.26 | 1.32 | 3.28 | 2.85 | 24.39 | 186.20 |
| Barnyard millet | 61.82 | 6.58 | 3.21 | 8.24 | 3.16 | 58.30 | 221.80 |

3. OMAPODI MIX

Ingredients

| | | |
|--------------------------------------|---|-------------|
| Finger millet/ kodo millet/ | | |
| little millet/ barnyard millet flour | - | 700 g |
| Bengal gram flour | - | 300 g |
| Salt | - | as required |
| Oil | - | as required |

Instant mix

- ❖ Mix all the ingredients thoroughly.
- ❖ Pack in airtight bags/containers.

Method

- ❖ Mix the Small millet omapodi mix with hydrogenated fat and required amount of water.
- ❖ Press the dough in a hand extruder.
- ❖ Fry in hot oil till they turn golden brown colour.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 54.43 | 14.84 | 2.46 | 2.15 | 3.27 | 228.41 | 318.36 |
| Kodo millet | 53.52 | 10.24 | 2.47 | 5.81 | 2.39 | 63.26 | 187.23 |
| Little millet | 59.76 | 11.72 | 2.73 | 3.34 | 3.21 | 28.15 | 92.57 |
| Barnyard millet | 58.83 | 11.52 | 2.43 | 4.42 | 3.29 | 46.22 | 125.41 |

4. VADA MIX

Ingredients

| | | |
|--------------------------------------|---|-------------|
| Finger millet/ kodo millet/ | | |
| little millet/ barnyard millet flour | - | 600 gm |
| Bengal gram flour | - | 300 gm |
| Onion | - | 50 gm |
| Green chilies | - | 20 gm |
| Curry leaves | - | 30 gm |
| Salt | - | as required |
| Oil | - | as required |

Instant mix

- ❖ Mix all the ingredients thoroughly.
- ❖ Pack in airtight bags / containers.

Method

- ❖ Mix the vada mix with required water to a thick dough consistency.
- ❖ Make small round balls and flatten on a greased polythene sheet.
- ❖ Remove and deep fry in oil, till they turn golden brown in colour.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 56.36 | 14.35 | 2.62 | 2.08 | 3.47 | 223.41 | 312.36 |
| Kodo millet | 51.23 | 9.36 | 2.13 | 5.21 | 2.06 | 53.46 | 183.42 |
| Little millet | 58.62 | 14.02 | 2.45 | 3.26 | 4.19 | 12.35 | 312.37 |
| Barnyard millet | 58.47 | 10.23 | 2.19 | 4.95 | 3.87 | 54.20 | 240.85 |

5. VADAGAM

Ingredients

| | |
|---|-----------|
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 900 g |
| Chili powder | - 50 g |
| Cumin seeds | - 50 g |
| Salt | - 20 g |
| Water | - 6000 ml |

Method

- ❖ Add chillie powder, cumin seeds and salt to the flour.
- ❖ Mix with water to get thick batter.
- ❖ Drop the batter in greased plates using a spoon.
- ❖ Allow it to sun dry.
- ❖ Pack the dried vadagam in air tight bags or container.
- ❖ Deep fry the vadagam in hot oil when required.

NUTRIENT CONTENT (Per 100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 64.80 | 6.57 | 1.17 | 3.24 | 3.51 | 309.60 | 254.7 |
| Kodo millet | 59.31 | 7.47 | 1.26 | 7.21 | 1.45 | 24.30 | 169.20 |
| Little millet | 60.30 | 6.93 | 4.23 | 6.84 | 8.37 | 15.30 | 198.00 |
| Barnyard millet | 58.95 | 5.58 | 1.98 | 6.82 | 4.50 | 12.64 | 252.00 |

6. PAPAD

Ingredients

| | |
|---|---------|
| Finger millet/ kodo millet/ little millet/ barnyard millet flour | - 400 g |
| Black gram flour | - 600 g |
| Oil | - 50ml |
| Cumin seeds | - 50 g |
| Salt | - 50 g |
| Sodium bicarbonate | - 10 g |

Method

- ❖ Mix Small millet flour, black gram flour and cumin seeds thoroughly.
- ❖ Add salt and sodium bicarbonate in water and sprinkle on the flour to make stiff dough.
- ❖ Divide the dough into small portions.
- ❖ Roll out into thin circular shapes, shade dry and pack.

Nutrient content (100 g)

| Name of the Product | CHO (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|---------|-------------|---------|-----------------|-----------|--------------|-----------------|
| Finger millet | 64.20 | 17.32 | 1.36 | 1.98 | 3.84 | 230.00 | 344.20 |
| Kodo millet | 61.76 | 17.72 | 1.40 | 1.14 | 2.48 | 103.20 | 306.20 |
| Little millet | 62.20 | 17.48 | 2.72 | 3.58 | 6.00 | 109.80 | 319.00 |
| Barnyard millet | 61.60 | 16.88 | 1.72 | 4.46 | 4.28 | 92.4 | 343.00 |

7. SMALL MILLET HEALTH MIX

Ingredients

| | |
|-------------------|--------|
| Wheat | - 200g |
| Kodo millet | - 200g |
| Little millet | - 200g |
| Foxtail millet | - 200g |
| Finger millet | - 200g |
| Whole green gram | - 100g |
| Whole Bengal gram | - 20g |
| Whole soya beans | - 20g |
| Sugar | - 100g |
| Peas (dried) | - 20g |
| Groundnut | - 20g |
| Almonds | - 20g |
| Cashew | - 20g |
| Dried ginger | - 5 g |
| Cardamom | - 2 g |
| Milk powder | - 20g |

Preparation of malt

- ❖ Wash millet seeds thoroughly in water.
- ❖ Soak the seeds for 5 hours
- ❖ Drain the excess water and tie in a muslin cloth.
- ❖ Allow the seed to sprout at room temperature ($27\pm3^{\circ}\text{C}$) for 24 hours
- ❖ Shade dry the germinated seeds for 48 hours.
- ❖ Roast the seeds at 120°C and allow it to cool.
- ❖ Grind the germinated seeds to fine flour.
- ❖ Pack the flour in air tight bags or containers.

Nutrient content (100 g)

| Carbohydrate (g) | Protein (g) | Fat (g) | Crude Fibre (g) | Iron (mg) | Calcium (mg) | Phosphorus (mg) |
|---------------------|----------------|------------|--------------------|--------------|-----------------|--------------------|
| 77.48 | 5.86 | 1.04 | 2.88 | 31.51 | 277.60 | 226.40 |

Raw materials

1. M/S. Eswari Enterprises
Shop No.12/ Corporation Shopping Complex,
West Arogyasamy Road,
R.S.Puram, Coimbatore-641 002.
2. M/S. Viveka Agencies,
657, Thomas Street,
Coimbatore - 641 001.

Fats and Oils

3. M/S. Prabha Traders,
918-A, Rangai Gowder Street,
Coimbatore - 641 001.

Packaging materials

4. M/S. Thangam Paks,
802, Raja Street,
Coimbatore - 691001.
5. SEELERS INDIA AGENCIES,
No-118/19, A-1 Block,
8th main road,
(Telephone exchange back side)
Shanthy colony, Anna Nagar,
Chennai - 600040.

Machineries

6. M/S. Arun's Engineering Works,
No.213, Sitra Kalapatti Road,
Near, LMW, Unit VIII,
Kalapatti Post,
Coimbatore - 641035.
7. Imayam Engineering Works
Bakery Machines and Ovens
Pollachi main road, Near Eachanari railway gate
Coimbatore -641 021
8. SCIENCE WORLD

8G, Venkateswara Layout,
Sastri Street, Thillai Nagar,
Selvapuram, Coimbatore – 641 026

9. SRI GANESH MILL STORE,
Kings Complex,
344, Dr. Nagappa road,
Coimbatore-641018.
10. SARASWATHI INDUSTRIES,
41, A, I G P Nagar,
Krishnapuram,
Saravanampatti (PO),
Coimbatore-641035.
11. VICTOR MACHINES,
4/235, Allamarakadu,
Munniyappan kovil backside,
Salem-636004.
12. GANAPATHI COTTAGE INDUSTRIES,
38/16A, Kamarajar Nagar,
2nd Street, R.K. Puram, Ganapathi (PO),
Coimbatore - 641006.