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Traditional Recipes from Kodo millet

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

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PAPAD

Ingredients

Kodo millet flour	-	500 g
Black gram flour	-	450 g
Cumin seeds	-	50 g
Salt	-	50 g
Sodium bicarbonate	-	50 g



Method

- Mix kodo 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 (Per 100g)

Carbohydrate	-	62.75 g
Protein	-	16.2 g
Fat	-	1.4 g
Fiber	-	4.95 g
Calcium	-	90.5 mg
Phosphorous	-	286.5 mg
Iron	-	2.15 mg
Niacin	-	2.0 mg
Folic acid	-	77.6 µg

VADAGAM

Ingredients

Kodo millet flour	-	900 g
Chilli powder	-	50 g
Cumin seeds	-	50 g
Salt	-	20 g
Water	-	6000 ml



Method

- Add chilli 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 airtight bags or container.
- Deep fry the vadagam in hot oil when required.

Nutrient content value (Per 100g)

Carbohydrate	-	62.7 g
Protein	-	9.2 g
Fat (g)	-	2.32 g
Fiber	-	10.2 g
Calcium	-	86.3 mg
Phosphorous	-	213 mg
Iron	-	1.16 mg
Niacin	-	1.16 mg
Folic acid	-	20.8 µg

INTRODUCTION

Kodo millet, (*Paspalum scrobiculatum* L.) is widely distributed in damp habitats across the tropics and subtropics of the world. It is indigenous cereal of India and is grown today in Uttar Pradesh in the north and Kerala and Tamilnadu in the south. This cereal is also known as varagu, kodo, haraka and arakalu. It forms the main stay of the dietary nutritional requirements. It has high protein content (11%), low fat (4.2%) and very high fibre content (14.3%).

Kodo millet is very easy to digest, it contains a high amount of lecithin and is excellent for strengthening the nervous system. Kodo millets are rich in B vitamins, especially niacin, B6 and folic acid, as well as the minerals such as calcium, iron, potassium, magnesium and zinc. Kodo millets contain no gluten and is good for people who are gluten-intolerant. Regular consumption of kodo millet is very beneficial for postmenopausal women suffering from signs of cardiovascular disease, like high blood pressure and high cholesterol levels.

Nutrient composition of kodo millet (Per 100g)

S.No	Nutrient	Quantity
1.	Moisture	11.6 g
2.	Protein	10.6 g
3.	Fat	4.2 g
4.	Fiber	10.2 g
5.	Calorific value	346 kcal
6.	Carbohydrate	59.2 g
7.	Minerals	4.4 mg
8.	Calcium	27 mg
9.	Phosphorous	188 mg
10.	Iron	0.5 mg

BREAKFAST RECIPES

IDLI

Ingredients

Kodo millet rice	-	730 g
Black gram dhal	-	250 g
Fenugreek seeds	-	20 g
Salt	-	as required



Method

- Soak kodo millet rice and black gram dhal separately for 4 hours and grind coarsely.
- Add salt, mix it thoroughly 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)

Carbohydrate	-	63.89g
Protein	-	12.6 g
Fat	-	1.49 g
Fiber	-	6.94 g
Calcium	-	61.4 mg
Phosphorous	-	241 mg
Iron	-	1.45 mg
Niacin	-	1.98 mg
Folic acid	-	51.6 µg

THATTU VADAI

Ingredients

Kodo millet flour	-	800 g
Roasted bengal gram dhal-	100 g	
Butter	-	50 g
Chilli 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 in hot oil till they turn to golden brown.
- Allow it to cool and pack in air tight containers.

Nutrient content (Per 100g)

Carbohydrate	-	59.85 g
Protein	-	9.49 g
Fat	-	5.9 g
Fiber	-	8.34 g
Calcium	-	48.8 mg
Phosphorous	-	197 mg
Iron	-	1.44 mg
Niacin	-	2.07 mg
Folic acid	-	34.3 µg

MURUKKU

Ingredients

Kodo millet flour	-	850 g
Chilli powder	-	30 g
Sesame seeds	-	30 g
Cumin seeds	-	20 g
Asafoetida	-	20 g
Butter	-	50 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.
- Extrude the dough in a hand extruder.
- Deep fry in hot oil till it turns to golden brown colour.
- Allow it to cool and pack in air tight containers.

Nutrient content (Per 100g)

Carbohydrate	-	56.5 g
Protein	-	8.12 g
Fat	-	6.98 g
Fiber	-	8.52 g
Calcium	-	105 mg
Phosphorous	-	189.8 mg
Iron	-	1.77 mg
Niacin	-	2.07 mg
Folic acid	-	22.5 µg

DOSA

Ingredients

Kodo millet rice	-	730 g
Black gram dhal	-	250 g
Fenugreek seeds	-	20 g
Salt	-	as required



Method

- Soak kodo millet rice and black gram dhal separately for 4 hours and grind into fine batter.
- Add salt, mix it thoroughly and allow it to ferment overnight.
- Apply oil on the hot plate and pour batter and cook till crisp dosa is obtained.
- Serve hot with chutney or sambar.

Nutrient content (Per 100g)

Carbohydrate	-	63.89 g
Protein	-	12.6 g
Fat	-	1.49 g
Fiber	-	6.94 g
Calcium	-	61.4 mg
Phosphorous	-	241.0 mg
Iron	-	1.45 mg
Niacin	-	1.98 mg
Folic acid	-	51.6 µg

PANIYARAM

Ingredients

Kodo millet rice	-	450 g
Black gram dhal	-	200 g
Fenugreek seeds	-	20 g
Onion (chopped)	-	150 g
Green chillies (chopped)	-	40 g
Cumin seeds	-	20 g
Curry leaves	-	20 g
Oil	-	100 ml
Salt	-	as required



Method

- Soak kodo millet rice, black gram dhal and fenugreek seed separately for 4 hours and drain the water and grind into fine batter.
- Add salt and allow it to ferment overnight.
- Add all the ingredients (chopped onion and chillies) into the batter 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)

Carbohydrate	-	45.57 g
Protein	-	9.94 g
Fat	-	11.4 g
Fiber	-	5.1 g
Calcium	-	92.0 mg
Phosphorous	-	193.0 mg
Iron	-	1.73 mg
Niacin	-	1.7 mg
Folic acid	-	43.2 µg

HOT KOLUKATTAI

Ingredients

Kodo millet flour	-	600 g
Onion (chopped)	-	150 g
Green chillies (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	-	20 g
Water	-	as required



Method

- Add required quantity of water to the kodo millet flour and mix thoroughly without lumps.
- Season the ingredients and add to the kodo 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 100g)

Carbohydrate	-	45.11 g
Protein	-	6.55 g
Fat	-	11.9 g
Fiber	-	6.12 g
Calcium	-	70.7 mg
Phosphorous	-	151 mg
Iron	-	1.78 mg
Niacin	-	1.51 mg
Folic acid	-	19.8 µg

RIBBON PAKODA

Ingredients

Kodo millet flour	-	900 g
Butter	-	50 g
Chilli powder	-	30 g
Sesame seeds	-	20 g
Salt	-	20 g
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 into golden brown colour.
- Allow it to cool and pack in air tight containers.

Nutrient content (Per 100g)

Carbohydrate	-	60.76 g
Protein	-	8.32 g
Fat	-	6.37 g
Fiber	-	9.07 g
Calcium	-	58.1 mg
Phosphorous	-	192 mg
Iron	-	0.71 mg
Niacin	-	2.18 mg
Folic acid	-	23.5 µg

IDIAPPAM

Ingredients

Kodo millet flour	-	500 g
Sugar	-	250 g
Coconut milk	-	250 ml
Salt	-	10 g
Water	-	as required



Method

- Steam the kodo millet flour for five minutes.
- Blend steamed flour, salt and water thoroughly and extrude in idiappam machine.
- Steam the extruded dough for 20-25 minutes
- Serve hot with coconut milk and sugar.

Nutrient content (Per 100g)

Carbohydrate	-	47.5 g
Protein	-	5.96 g
Fat	-	11.2 g
Fiber	-	4.8 g
Calcium	-	90.6 mg
Phosphorous	-	139.7 mg
Iron	-	2.38 mg
Niacin	-	1.45 mg
Folic acid	-	14.8 µg

ROTTI

Ingredients

Kodo millet flour	-	400 g
Raw rice flour	-	200 g
Onion (chopped)	-	150 g
Green chillies (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 kodo 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 dosa plate and cook with oil.
- Serve it hot.

Nutrient content (Per 100g)

Carbohydrate	-	47.5 g
Protein	-	5.96 g
Fat	-	11.2 g
Fiber	-	4.80 g
Calcium	-	90.6 mg
Phosphorous	-	139.7 mg
Iron	-	2.38 mg
Niacin	-	1.45 mg
Folic acid	-	14.8 µg

PAKODA

Ingredients

Kodo millet flour	-	750 g
Onion (chopped)	-	150 g
Green chillies (chopped)	-	50 g
Cumin seeds	-	30 g
Curry leaves	-	20 g
Salt	-	20 g
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 different shapes in hot oil.
- Serve hot.

Nutrient content (Per 100g)

Carbohydrate	-	52.9 g
Protein	-	7.33 g
Fat	-	1.57 g
Fiber	-	7.67 g
Calcium	-	76.8 mg
Phosphorous	-	170 mg
Iron	-	1.15 mg
Niacin	-	1.75 mg
Folic acid	-	20.7 µg

SNACKS

VADAI

Ingredients

Kodo millet rice	-	500 g
Bengal gram dhal	-	250 g
Onion (chopped)	-	150 g
Green chillies (chopped)	-	80 g
Curry leaves	-	20 g
Salt	-as required	
Oil	- for frying	



Method

- Soak kodo millet rice and bengal gram dhal for 4 hours and grind coarsely to thick consistency.
- Mix all the ingredients into the batter.
- Form the mixture into round shapes.
- Deep fry the dough in hot oil till they turn to golden brown colour.
- Serve hot with chutney.

Nutrient content (Per 100g)

Carbohydrate	-	51.4 g
Protein	-	9.97 g
Fat	-	2.19 g
Fiber	-	5.56 g
Calcium	-	52.5 mg
Phosphorous	-	193 mg
Iron	-	2.13 mg
Niacin	-	1.79 mg
Folic acid	-	52.6 µg

PUTTU

Ingredients

Kodo millet flour	-	600 g
Jaggery	-	200 g
Shredded coconut	-	200 g
Salt	-	20 g



Method

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

Nutrient content (Per 100g)

Carbohydrate	-	61.14 g
Protein	-	5.96 g
Fat	-	9.18 g
Fiber	-	6.12 g
Calcium	-	34.2 mg
Phosphorous	-	169 mg
Iron	-	1.14 mg
Niacin	-	1.36 mg
Folic acid	-	16.4 µg

UPPMA

Ingredients

Kodo millet rava	-	600 g
Onion (chopped)	-	200 g
Green chillies (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	-	4000 ml
Salt	-	as required



Method

- Grind kodo 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)

Carbohydrate	-	45.4 g
Protein	-	6.91 g
Fat	-	8.84 g
Fiber	-	6.07 g
Calcium	-	56.3 mg
Phosphorous	-	158 mg
Iron	-	3.13 mg
Niacin	-	1.57 mg
Folic acid	-	22.8 µg

SWEET ADAI

Ingredients

Kodo 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 kodo millet flour, roasted bengal gram flour, green gram flour to the syrup and mix thoroughly.
- Knead the mix to a thick consistency.
- Flatten the dough on a dosa plate and cook till it turns to golden brown colour.
- Serve it hot.

Nutrient content (Per 100g)

Carbohydrate	-	72.57 g
Protein	-	10.5 g
Fat	-	1.55 g
Fiber	-	3.87 g
Calcium	-	54.8 mg
Phosphorous	-	199 mg
Iron	-	3.01 mg
Niacin	-	1.35 mg
Folic acid	-	51.1 µg

KESARI

Ingredients

Kodo millet rava	-	300 g
Sugar	-	400 g
Milk	-	100 ml
Ghee	-	100 g
Cashewnuts	-	50 g
Raisins	-	50 g
Water	-	2500 ml
Lemon yellow colour	-	as required



Method

- Heat ghee in a pan, add kodo 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 kodo millet rava to the boiling water and stirring continuously and cook for 15 to 20 minutes.
- Decorate with cashewnuts and dry fruits and serve it hot.

Nutrient content (Per 100g)

Carbohydrate	-	64.9 g
Protein	-	5.05 g
Fat	-	13.2 g
Fiber	-	2.82 g
Calcium	-	33.9 mg
Phosphorous	-	93.8 mg
Iron	-	0.95 mg
Niacin	-	0.69 mg
Folic acid	-	7.78 µg

ADAI

Ingredients

Kodo millet rice	-	400 g
Red gram dhal	-	150 g
Green gram dhal	-	100 g
Parboiled rice	-	100 g
Chilli powder	-	30 g
Cumin seeds	-	30 g
Asafoetida	-	20 g
Curry leaves	-	20 g
Oil	-	150 ml
Salt	-	as required



Method

- Soak kodo 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 dosa plate and spread the adai batter and cook.
- Serve hot with chutney.

Nutrient content (Per 100g)

Carbohydrate	-	62.25 g
Protein	-	13.1 g
Fat	-	11.9 g
Fiber	-	6.35 g
Calcium	-	103 mg
Phosphorous	-	243 mg
Iron	-	2.58 mg
Niacin	-	2.6 mg
Folic acid	-	51.0 µg

CHAPATHI

Ingredients

Kodo millet flour	-	450 g
Wheat flour	-	450 g
Salt	-	20 g
Oil	-	100 ml
Water	-	as required



Method

- Add salt and water to the flour and knead it into soft dough.
- Make round balls (50 g) and roll to flat chapathi.
- Toast the chapathi on a preheated pan.
- Serve hot with any curry or chutney.

Nutrient content (Per 100g)

Carbohydrate	-	54.12 g
Protein	-	8.16 g
Fat	-	11.2 g
Fiber	-	4.36 g
Calcium	-	30 mg
Phosphorous	-	217 mg
Iron	-	2.16 mg
Niacin	-	2.52 mg
Folic acid	-	23.5 µg

ADHIRASAM

Ingredients

Kodo millet flour	-	250 g
Raw rice flour	-	250 g
Jaggery	-	500 g
Cardamom powder	-	as required
Dry ginger	-	as required
Water	-	as required
Oil	-	for frying



Method

- Mix kodo millet flour and raw rice flour.
- 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 a 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 to golden brown.

Nutrient content (Per 100g)

Carbohydrate	-	83.5 g
Protein	-	3.98 g
Fat	-	0.53 g
Fiber	-	2.30 g
Calcium	-	49.3 mg
Phosphorous	-	107 mg
Iron	-	16.3 mg
Niacin	-	0.98 mg
Folic acid	-	7.78 µg

KHEER

Ingredients

Kodo millet rice	-	300 g
Jaggery	-	300 g
Cardamom powder	-	20 g
Cashewnuts	-	50 g
Raisins	-	50 g
Ghee	-	80 g
Milk	-	200 ml
Water	-	3500 ml



Method

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

Nutrient content (Per 100g)

Carbohydrate	-	54.43 g
Protein	-	4.33 g
Fat	-	11.3 g
Fiber	-	3.22 g
Calcium	-	55.7 mg
Phosphorous	-	109 mg
Iron	-	1.77 mg
Niacin	-	0.71 mg
Folic acid	-	7.78 µg

KHAKRA

Ingredients

Kodo millet flour	-	500 g
Wheat flour	-	500 g
Salt	-	20 g
Water	-	400 ml



Method

- Add salt and water to the flour and knead into soft dough.
- Make round balls (30 g) and roll into thin chapathi.
- 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 100g)

Carbohydrate	-	54.12 g
Protein	-	8.16 g
Fat	-	11.2 g
Fiber	-	4.36 g
Calcium	-	30 mg
Phosphorous	-	217 mg
Iron	-	2.16 mg
Niacin	-	2.52 mg
Folic acid	-	23.5 µg

SWEETS

HALWA

Ingredients

Kodo millet flour-	200 g
Wheat flour	- 100 g
Powdered sugar	- 350 g
Ghee	- 300 g
Cashewnuts	- 50 g
Water	-2000 ml



Method

- Fry kodo 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)

Carbohydrate	-	56.03 g
Protein	-	3.97 g
Fat	-	32.8 g
Fiber	-	2.06 g
Calcium	-	16.9 mg
Phosphorous	-	96.0 mg
Iron	-	0.93 mg
Niacin	-	0.89 mg
Folic acid	-	8.2 µg

SWEET KOLUKATTAI

Ingredients

Kodo millet flour	-	600 g
Jaggery	-	200 g
Shredded coconut	-	100 g
Roasted bengal gram dhal-	50 g	
Sesame seeds	-	50 g
Cardamom powder	-	as required
Salt	-	as required



Method

- Add required amount of water and salt to the kodo millet flour and mix it thoroughly.
- Prepare the 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 100g)

Carbohydrate	-	65.3 g
Protein	-	7.97 g
Fat	-	7.48 g
Fiber	-	6.41 g
Calcium	-	110 mg
Phosphorous	-	199.7 mg
Iron	-	1.99 mg
Niacin	-	1.67 mg
Folic acid	-	9.92 µg