

IMPORTANCE OF MILLETS AND THEIR NUTRITIONAL RECIPES

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ABSTRACT

In Ayurveda- millets are known as *Kshudra dhanya*- is a group of small, seeded grasses widely grown around the world as cereal crops or grains for fodder and human food¹. Millets are rich in dietary fiber, both soluble and insoluble. The insoluble fiber in millet is known as a prebiotic, which means it supports good bacteria in our digestive system. As ayurveda believes in prevention is better than cure, following this now a days food consumption method is getting changed, their cooking procedures, recipes are more enhancing with the advancement of time. **Aims and objects:** To compile the concept of *Kshudra dhanya* classically and to know the nutritional benefits of millets with their recipes. **Materials and method:** The data is collected from various classical books, journals and articles related to *Kshudra dhanya*. So, an attempt is made in this article to brief the nutritional values of different types of *Kshudra dhanya* and its various recipes.

Keywords: *Kshudra dhyana*, millets, prebiotic, Ayurveda, nutritional values.

INTRODUCTION

The smaller grains whose outer layer is not removed are called millets. It includes bajra, kodo, ragi and a few other which are known as minor millets or pseudo cereals.² In Ayurveda, millets are said to be used in *santarpana janya vyadhis* they are best for *kapha*

pittaja vyadhi and should be excluded for *vata vyadhis*. Millets have been an integral part of our diet for centuries. In addition to a plethora of health benefits, millets are also good for the environment with low water and input requirement. With the aim to

create awareness and increase production and consumption of millets, Government of India has declared 2023 year as The International Year of Millets³ (IYOM 2023). The main health benefits of millets are improving gut health, gluten free grains, controls blood sugar levels, good source of beta-carotene and B vitamins, rich in macro and micronutrients, contains high antioxidants, rich in bioactive compounds and reduce cholesterol.

Ayurveda gives more importance to the diet for both healthy people and diseased people. The classical reference for *Kshudra dhanya varga* is explained in detail in *Dhanya varga*⁴. Gluten intolerance is one of the main gastro-intestinal issues seen nowadays.

Kshudra dhanya being gluten free becomes a choice. *Kshudra dhanya* are also known as *Kudhanya* or *Truna dhanya*.

Types of *Kshudra Dhanya*⁵

Major *Kshudra dhanya*

1. Bajra - Pearl millet
2. Ragi - Finger millet

Minor *Kshudra dhanya*

1. Kanguni - Foxtail millet
2. Barri - Proso millet
3. Samai - Little millet
4. Kodrava - Kodo millet
5. Jhangora - Barnyard millet

Table no 1: Showing general *Guna and Karma* of *Kshudra dhanya*⁶.

<i>Rasa (Taste)</i>	<i>Kashaya (Astringent), Madhura (Sweet)</i>
<i>Guna (Qualities)</i>	<i>Laghu (Light), ruksha (Dry)</i>
<i>Veerya (Potency)</i>	<i>Sheeta (Cold)</i>
<i>Vipaka (Post Digestive effect)</i>	<i>Katu (Pungent)</i>
<i>Karma (Karma)</i>	<i>Lekhana (Scraping), kledasoshana (drying of moisture).</i>
<i>Effect on Tridosha, mala (Excretory products) and dhatu (Tissues)</i>	<i>Kapha-pittahara, vatakara, Baddha purisha (Constipation), Rakta shamaka (Suppresses blood disorders)</i>

Table no: 2- Illustrating the nutritional values and recipes of *Kshudra dhanya*.

Sl.no	Kshudra dhanya	Nutritional values	Recipes
1	Pearl millet ⁷	Protein 11.6g, Carbohydrates 5.0g, Minerals 67.5g, Calcium 2.3mg, Iron 42.0mg, Thiamine 8mg, Riboflavin 0.3mg, Niacin 2.3mg and Energy 361kcal	Bajra Methi muthiya (A Gujurati dish), Bajra healthy dosa. Roti,
2	Finger millet ⁸	Proteins 7.3g, Carbohydrates 1.3g, Minerals 72.0g, Calcium 2.7g, 344.0g Iron, 3.9 g Thiamine, 0.2g Riboflavin, 0.18g Niacin, 2.3kcal Energy.	Ragi Idli, Ragi dosa, Ragi jag-gery laddoo, Ragi milk shake, ragi roti and rotla.
3	Foxtail millet ⁹	Dehusked sample of kangani: Protein 12.3, Fat 4.3, minerals 3.3, crude fibers 8.0 and other carbohydrates 60.9%. the principal Proteins are Prolamin, albumin and globulin and glutelin 37%.	Foxtail millet idli, Dosa
4	Proso millet ¹⁰	Energy 334kcal, Carbohydrate 68.5g, dietary fibre 14.6g, Protein 12.5g and Fat 1.1g.	Like upma, Proso millet dosa, Proso millet khichdi.
5	Little millet ¹¹	Carbohydrate 60.9g, Fat 5.2g, Iron 9.3g, Calcium 17mg, Phosphorous 220mg, Calories 329 kcal and Magnesium 114mg.	Upma, Chikki
6	Kodo millet ¹²	Contains Moisture, Fats, Proteins, Carbohydrates, Calcium, Phosphorous, Iron. Vitamin B is also present.	Like Idli, Upma, Kodo millet dosa

7	Barnyard millet ¹³	Protein, Carbohydrates, Calcium, Phosphorous, Vitamin A& B. Glutelin is the major constituent of protein	Tikki, Pullav, Idli, Barnyard lemon rice, Sweet Pongal, dosa.
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DISCUSSION

In Ayurveda, millets belong to the group of *Trina dhanya* i.e group of grains produced by grass like plants. Millets are synonymously called by the name *Kshudra dhanya*, *Trinadhanya* and *Kudhanya*. The attributes of millets having *Madhura* and *Kashaya rasa*, *katu vipaka*, *ruksha guna*, *vatakara* and alleviates *pitta*, *kapha* and *rakta dosha*. By assessing the properties of *Kshudra dhanya* it is concluded that *Kshudra dhanya* should be used in *kaphaja*, *pittaja disorders* and useful in *raktaja vyadhis* (Blood diseases). It is contraindicated in *vataja* disorders as it worsens the condition caused by *vata dosha*. Millets are small, seeded gluten free cereal. Its high protein content makes it a good energy booster. Millets are a good source of antioxidants and improve digestive health, respiratory functions, detoxify the body, improves immunity¹⁴. As ayurveda says health of person is good if he consumes good food at right time and right place¹⁵. In *Ahaar Vidhi Vishesha Ayatanani* (Proper rules for intake of food) specific rules and regulations are explained by Charakacharya in which *paaka* procedure (Cooking method) plays an important role in maintaining the balance of *Tridoshas* which in turn maintains once health. To get full benefits from the *Kshudra dhanya* one can opt for preparing new recipes like Pearl millet dosa, finger millet laddoo, kodo millet appam, barnyard millet pullav and many more.

Specific qualities are explained in different texts, and a few important properties are given below.

1. Bajra¹⁶ – called by the name Pearl millet. Bajra is *Ruksha*, *Ushna*(Hot), it is *Balya* (Gives strength), *Deepana* (Carminative), *Pumsatvahara* (Helps in infertility) and *Durjara* (Delay in digestion).
2. Ragi¹⁷ – called Finger millet. Ragi is *Laghu*, *Kashaya*, *Tikta*, *Madhura rasa*, *Sheeta virya*, *Truptikara* (Gives feeling of satisfaction),
3. Kangani¹⁸ – called Foxtail millet. It has got *Madhura Kashaya rasa*, *Ruchi kara* (Gives taste),

Sheet virya, *Vatakara*, *Dahahara* (reduces burning sensation), *Asthibandhan kara* (Joins the Fractured bones).

4. Barri¹⁹ – called Proso millet. It has got properties like *Guru* (Heavy), *Ruksha* (Dry), *Brumhana* (Nourishment), *Kaphahara*.
5. Samai²⁰ – known as little millet. Little millet is *Madhura kashaya rasa*, *Snigdha-laghu* (Unctous-light) *guna*, *Sheet virya*, *Vatakara*, *Kaphapittaghna*, *Sangrahi* (Stops the excess flow), *Vishaghna* (reduces the poisonous effect).
6. Kodrava²¹– known as Kodo millet. It is used after storing for six months as *Aparipakwa* (Half cooked) and *Nava* (new) *kodrava* have poisonous effects. *Kodrava* is *Sheet virya*, *graahi* , *Vishaghna* and *Pittakaphaghan*.
7. Jhangora²²– called as Barnyard millet. Qualities same as like *Kodrava*, it is *Ruksha*, *Soshana* (Dries), *Vatala* and *Kaphapittahara*.

CONCLUSION

As advancement in modern sophisticated sedentary lifestyle is giving origin to various epidemic diseases and *Kshudra dhanya* are best to be used in these diseases. Millets can be used as preventive tool in diet for regular intake and in therapeutic use also. Millets are best for *Kapha-pittaja vikara* (Diseases of *Kapha-pitta dosha*) and should be avoided in *Vataja vyadhi* (Diseases of *vata dosha*). There are so many *Pathya kalpanas* (Food preparation) prepared from the millets which suits both *Roga* (Disease) and *Rogi* (Patient) should be chosen to avail the complete health benefits. Moreover, as per the choice many recipes should be prepared which includes desserts, porridges, drinks for getting more benefits taking them in regular ways.

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