

Nutritional Value of Shami Dhanya Varga With Special Reference To Charak Samhita

Dr. Abhaykumar S. Kulkarni

Professor and H.O.D.

Department of Dravyaguna Vigyan ,

S.G.E.S.⁷⁸ Dr.N.A.Magadam Ayurvedic Medical College , Hospital & Research Centre , Ankli , Dist-Belgavi , Karnataka

Abstract: Acharya Charaka in his Samhita has classified food substances or *Aahara dravyas* into various subgroups . Shami Danya varga (pulses) is one of them . The study of the dravyas mentioned in this varga gives an insight to the important pulses which were used during ancient period . Many of these pulses are an integral part of diet in present era as well . The importance of Shami Dhanya is their nutritional value and the health benefits . This review article focuses on the Ayurvedic properties of Shami Dhanya Varga dravyas as discribed by Charaka as well as their nutritional analysis according to modern diatetics .

Keywords : Shami dhanya varga ,Charak Samhita, Aahara dravyas , nutritional values

Introduction

Ayurveda is one of the oldest healthcare systems that was evolved in the Indian Subcontinent. It is a form of holistic medicine that's focused on promoting balance between your body and mind. Ayurveda focuses on various modalities of health and wellness through proper diet, digestion and nutrition. According to Ayurveda , there are three fundamental states of a being viz. physical , psychological & spiritual . The state of optimal health or *Swasthya* is dependent upon the balance between all three states. *Aahara* or the substances that we consume as a food plays a vital role in maintaining this euilibrium . In fact , Acharya Charaka has considered *Aahara* as one of the three basic pillars of life : the other two being sleep and regulated sexual life .

Charak Samhita has dedicated a separate chapter namely *Annapana Vidhi Adhyaya* to explain about classification ,properties (rasa ,veerya,vipaka , karma) , qualities & benefits of different foods . *Shami Dhanya Varga* is one of these classes . The dravyas mentioned in this group are the common constituents of our daily diet because of their nutritional value. The contents of this varga are discribed along with Shami Dhanya Varga which together fulfils the daily nutritional requirement of a person. Most of these dravyas are still consumed on daily basis by people from various parts of the globe . These food substances were known to Indian subcontinent during Samhita period and their properties were studied in detail . With the development of modern science of nutrition , these dravyas were analyzed and their chemical constituents were identified giving us a new insight to it's nutritional benefits .

Shami Dhanya Varga

Acharya Charaka has classified the food articals into 12 different groups. *Shami Dhanya* or (Pulses) is mentioned in the beginning along with Shuka dhanya varga. This group contains the following pulses .

1. MUDGA (Green Gram) *Phaseolus aureus*

AYURVEDIC PROPERTIES :

Alleviates vitiated Kapha & Pitta , Sweet , Dry , cold in potency , absorbent , light to digest , relieves fever , good for eyes , increases physical strength .

NUTRITIONAL VALUES : (per 100 gm)

Rich in Carbohydrates (27.64 %) , protein (64.04 %) , very good source for minerals like Potassium , Magnesium , Calcium , Phosphorus , Iron . Vitamins like Carotene , Thiamine , Niacin , Riboflavin , Ascorbic Acid & Folic Acid.

CHEMICAL CONSTITUENTS :

It contains total lipids (1.8 %) , crude fiber (1.68 %) , ash (4.84 %) , flavanoids (Flavones , isoflavones , isoflavanoids) , phenolic acids (Galic acid , Vanillic acid , Caffeic acid , Cinnamic acid , Protocatechuic acid , Shikimic acid) and organic acids .

2. KULATHA (Horsegram) *Macrotyloma uniflorum*

AYURVEDIC PROPERTIES :

Astringent in taste , hot in potency , alleviates vitiated Kapha & Vata , absorbent , lithotriptic , anti tussive , reduces corpulence , helpful in eye disease , abdominal lump

(*gulma*) controls the hiccough , eases dyspnoea

NUTRITIONAL VALUES : (*per 100 gm*)

Horse gram seed contains carbohydrate (57.2% w/w), protein (22% w/w), dietary fiber (5.3% w/w), fat (0.50% w/w), calcium (287 mg), phosphorus (311 mg), sodium (11.5 mg) , zinc (1.966 mg) , iron (6.77 mg) and calories (321 kcal) as well as vitamins like thiamine (0.4 mg), riboflavin (0.2 mg) and niacin (1.5 mg) per 100 grams of dry matter.

CHEMICAL CONSTITUENTS :

Moisture content (8.05%) , fat (0.45 %) , ash (3.91 %) , crude fiber (4.5 %)

3. MASHA (Blackgram) *Vigna mungo*

AYURVEDIC PROPERTIES :

Sweet in taste , heavy to digest , hot in potency , oily , unctuous , balances Vata to great extent , aphrodisiac , improves strength and digestion

NUTRITIONAL VALUES : (*per 100 gm*)

Carbohydrates (45%) , Protein (45%) , energy (17%) , Vitamins like folates , Niacin , Pantothenic acid , Pyridoxine , Riboflavin , Thiamin , Vit-A, Vit-C

CHEMICAL CONSTITUENTS :

Total fat (8%) , dietary fiber (48%) , Calcium (14%) , Copper (98%) , Iron (95%) , Magnesium (67%) , Phosphorus (54%) , Zinc (30%)

4. RAJA MASHA (Cow- pea) *Vigna unguiculata*

AYURVEDIC PROPERTIES :

Astringent in taste , dry , non slimy , heavy to digest , balances Kapha and aggravates Vata , useful in anorexia , laxative , decreases semen .

NUTRITIONAL VALUES : (*per 100 gm*)

Total Carbohydrates (22%) , Protein (42%) , total fat (3%) ,saturated fat (2%) , sodium (3%) , Vit-A , Vit-C , Thaimin (0.68%) , Riboflavin (0.17%) , Tryptophan (0.294%) , Tyrosine (0.771%) , Iron (9.95%) , Copper (1.059%) , Manganese (1.544 %) , Niacin (2.755%)

CHEMICAL CONSTITUENTS :

Dietary fiber insoluble (16.6%) , soluble fiber (2.7%) ,total ash (2.6%) , moisture (5.5%) ,

5. MAKUSHTA (Moth Bean) *Vigna aconitifolia*

AYURVEDIC PROPERTIES :

Sweet in taste , dry , cold in potency , absorbant , causes mild constipation , effective in bleeding disorders like epistaxis and menorrhagia

NUTRITIONAL VALUES : (*per 100 gm*)

Cal 343 , Carbohydrates (23%) , Protein (46%) , total fat (2%) , sodium (1%) , Potassium (25%) , Iron(60%) , Magnesium (107%) , Manganese (86%)

CHEMICAL CONSTITUENTS :

Ash (5.6%) , crude fiber (5.3%) , Palmitoleic acid , Stearic acid , Oleic acid , Linoleic acid , Lignin(0.2-2.6%)

6. TILA (Sesame seed) *Sesamum indicum*

AYURVEDIC PROPERTIES :

Having sweet,bitter, astringent taste , hot in potency , oily , decreases Vata and increases Kapha-Pitta , good for skin & hair growth , promotes strength.

NUTRITIONAL VALUES : (*per 100 gm*)

Cal. 573 , Carbohydrates (7%) , Protein (36%) , total fat (76%) , Calcium (97%) , Iron (81%) , Vit-B6 (40%)

CHEMICAL CONSTITUENTS :

Moisture (4.0 -5.3%) , Ash (5.2-6.2%) , Phytosterols (4.0%) , Uronic acid (10.14%) , Klason lignin (5.42%) , Palmitic acid , Palmitoleic acid , Linoleic acid , Arachidic acid , Eicosenoic acid

Discussion

Diet according to Ayurveda should be balanced in which all types of nutrients are included. The combination of grains (Shuk Dhanya) with the legumes (Shami Dhanya) is advised. One can justify this combination according to modern nutritional parameters. Some grains are deficient in the essential amino acid lysine whereas many legumes are deficient in essential amino acids methionine.

Pulses are moderately high in total calories. They are only natural sources wherein calorie composition is proportionately distributed in the healthy range of 70%, 20%, and 10% between carbohydrates, proteins and fats respectively. The protein profile of pulses is composed of all the required essential amino acids including leucine which are otherwise deficient in the cereal grains.

Pulses compose structurally complex carbohydrates, consisting of more long linear chain amylose than amylopectin. Amylose crystallizes more rapidly than amylopectin, and therefore, high-amylose starch is more resistant to digestion. Further, pulses starch composition is a type-1 indigestible resistant starch. Pulses, thus, helps in better regulation of blood glucose levels and improve insulin sensitivity even in diabetics.

Research trials found that regular consumption of high fiber, low salt and low saturated fat diet has been shown to bring reductions in blood pressure and cardiovascular diseases, and stroke.

Germinated pulses contain vitamin-C. Germination also favors bio-availability (absorption) of other vitamins and minerals. They indeed are excellent sources of B-complex vitamins such as pyridoxine, riboflavin, pantothenic acid, niacin and folates. Fresh tender beans indeed very rich in folates.

Pulses are natural low sodium foods. On the other hand, they comprise good amounts of potassium and magnesium. Both potassium and magnesium are heart-friendly minerals which counter pressing-effects of sodium and help regulate blood pressure.

Additionally, they carry other minerals in sufficient amounts such as calcium, manganese, zinc, iron and selenium.

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